Mōveo™ XP

Exercise Platform

User Manual

Operation & Installation Instructions for:

Moveo™ XP

8084 - 230 V Adjustable Table

8080 - 120 V Adjustable Table

Optional Equipment

80898 - LE Support Pad

80986 - Battery Backup

10-5211 - Cando® Exercise Bands

10-5330 - Cando® Handles

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Electromagnetic Compatibility (EMC) Tables

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FOREWORD

This manual has been written for the operators of the Moveo XP. It contains general instructions for operation, precautionary instructions, and maintenance recommendations. In order to obtain maximum life and efficiency from your Moveo XP, and to assist in the proper operation of the table, read and understand this manual thoroughly.

The specifications put forth in this manual were in effect at the time of the publication. However, owing to Chattanooga Group's policy of continuous improvement, changes to these specifications may be made at any time without obligation on the part of Chattanooga Group.

Before administering any treatment to a patient, you should become acquainted with the operating procedures, as well as the indications, contraindications, warnings, and precautions.

Product Description

The Moveo XP is a dynamic exercise platform designed for patients incapable of standing due to severe muscle weakness, poor postural control, orthostatic intolerance, and pain. This platform combines the benefits of a traditional tilt table with the benefits of exercise. The unique design of the Moveo XP provides the patient with the ability to perform lower extremity, partial weight-bearing exercises in a controlled environment. The mobile hi-lo platform provides an easy method to transfer the patient from their bed or directly from a wheelchair. By gradually increasing the incline of the table, therapists are able to adjust the intensity of the weight-bearing workout from 0% to 75% of the patient's body weight. Additionally, a leg support pad and fold-away split Foot Plates allow unilateral leg exercise for patients with a weight-bearing restriction or for lower extremity forced-use. The graded weight-bearing workout allows a safe and controlled transition from bed rest to functional mobility training while empowering the patient and enhancing self-confidence.

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SAFETY PRECAUTIONS

PRECAUTIONARY DEFINITIONS

The precautionary instructions found in this section and throughout this manual are indicated by specific symbols. Understand these symbols and their definitions before operating this equipment. The definition of these symbols are as follows:

CAUTION

Text with a "CAUTION" indicator will explain possible safety infractions that could have the potential to cause minor to moderate injury or damage to equipment.

WARNING

Text with a "WARNING" indicator will explain possible safety infractions that will potentially cause serious injury and equipment damage.

DANGER

Text with a "DANGER" indicator will explain possible safety infractions that are imminently hazardous situations that would result in death or serious injury.

Explosion Hazard

Text with an "Explosion Hazard" indicator will explain possible safety infractions if this equipment is used in the presence of flammable anesthetics.

Spontaneous Combustion

Text with a "SPONTANEOUS COMBUSTION" indicator will explain possible safety infractions that could create conditions for a Spontaneous Combustion if the material is mishandled and not disposed of properly.

Corrosive

Text with a "CORROSIVE" indicator will explain possible safety infractions if the chemical components of the battery are exposed to air, skin, or other materials.

Dangerous Voltage

Text with a "Dangerous Voltage" indicator serves to inform the user of possible hazards resulting in the electrical charge delivered to the patient in certain treatment configurations of TENS/NMES waveforms.

Accompanying Documentation

Text with an "Accompanying Documentation" indicator serves to refer the operator to other documentation.

NOTE: Throughout this manual, "NOTE" may be found. These Notes are helpful information to aid in the particular area or function being described.

SAFETY PRECAUTIONS

CAUTIONS

⚠ CAUTION

- Read, understand, and practice the precautionary and operating instructions found in this manual. Know the limitations and hazards associated with your new treatment table. Observe any and all precautionary and operational decals placed on the table.
- This table should be operated, transported, and stored in temperatures between -18 °C and 60 °C (0 °F and 140 °F), with relative humidity ranging from 30% - 80% to prevent damage to the table or its components.
- Transport of this table should always be done with the Back Rest in the horizontal position. The table should be left in the horizontal position (down) when not in use.
- Support the table sections with both hands when making any adjustments.
- Inspect all cables and connectors before each use.
- DO NOT exceed table weight capacity of 182 kg (400 lbs).
- The Cando® exercise bands offered as an accessory to this table contain dry natural rubber and may cause allergic reactions in patients with allergies to latex.
- The Battery Backup should be operated, transported, and stored in temperatures between 15 °C and 40 °C (59 °F and 104 °F), with Relative Humidity ranging from 30%-60%.

⚠ CAUTION

- DO NOT operate this table in an environment where other devices are being used that intentionally radiate electromagnetic energy in an unshielded manner. Portable and mobile RF communications equipment can affect Medical Electrical Equipment.
- This table generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to other devices in the vicinity. However, there is no guarantee that interference will not occur in a particular installation. Harmful interference to other devices can be determined by turning this table on and off. Try to correct the interference using one or more of the following: reorient or relocate the receiving device, increase the separation between the equipment, connect the equipment to an outlet on a different circuit from that which the other device(s) are connected, and consult the Chattanooga Group Service Department for help.
- When using the Battery Pack accessory, make certain the battery is charged before you attempt to use the table.
- Angles and weights used in this manual are for reference only.
- Dispose of all products in accordance with local and national regulations and codes.

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SAFETY PRECAUTIONS

WARNINGS

⚠ WARNING

- THIS TABLE IS NOT TO BE USED FOR A TRANSPORT DEVICE. NEVER TRANSPORT THE PATIENT ON THE TABLE.
- Make certain that the table is electrically grounded by connecting only to a grounded electrical service receptacle conforming to the applicable national and local electrical codes.
- Never place your hands or feet near the working mechanism of the table when making any and all adjustments to height or table sections.
- Do not sit or allow patients to sit on the end of the Back Rest or anywhere on the Foot Plates.
- Do not smoke on or around table.
- The Carriage must be locked with the Key Pins before transferring patients to and from the table. See **page 26** for more information about locking the Carriage.
- DO NOT lock the Carriage when the table is inclined at any angle. The table must be completely horizontal before locking.
- DO NOT adjust the Foot Plate angle when the table is inclined at any angle.
- DO NOT adjust the Foot Plate angle during exercise.
- Make certain that all power cords, tubes, and hospital equipment is clear from the table when the table is in use.
- Make certain the patient's range of motion limit does not allow more than a 90° knee flexion.

⚠ WARNING

- Do not allow any unsupervised patient access to the treatment table.
- When not in use, the table should be protected against unqualified use.
- Do not leave the table unlocked and unattended at any time.
- Care must be taken when operating this table adjacent to or stacked with other equipment. Potential electromagnetic or other interference could occur to this or other equipment. Try to minimize this interference by not using other equipment (i.e. cell phones, etc.) in conjunction with it.
- Make certain the cushions and pads of the table are protected against puncture from patients that may be wearing external fixation devices (e.g., HALO).
- Use only accessories that are specially designed for this table. Do not use accessories manufactured by other companies on this table. Chattanooga Group is not responsible for any consequence resulting from using products manufactured by other companies. The use of other accessories or cables may result in increased emissions or decreased immunity of this table and safety of the patient.
- Patient must be cleared by a physician for mobilization.
- Use of other parts or materials can degrade minimum safety.
- At temperatures below 0 °C (32 °F), the gas absorption reaction is not sufficient and causes an increase of the gas pressure inside the battery. This condition can activate the safety vent and lead to alkaline gas leaking and battery performance deterioration.

WARNINGS (CONTINUED)

⚠ WARNING

- Charging efficiency of the Battery Backup drops at temperatures above 40 °C (104 °F) and can disrupt full charging and lead to deterioration in performance and battery cell leakage.
- Disconnect Battery Backup if table is not to be used for an extended period.
- When the integrity of the external protective conductor in the installation or its arrangement is in doubt, the table shall be operated from its internal electrical power source.
- Disconnect the table from the power source (outlet and Battery Backup if installed) before attempting any maintenance, installation, removal, or replacement procedures to prevent electrical shock and possible damage to table.

⚠ WARNING

- Before, during, and after exercise, do the following:
  - Monitor vital signs closely (i.e., heart rate, oxygen saturation, blood pressure, and respiratory pattern).
  - Monitor rate of perceived exertion and watch for outward signs of distress.
  - Be constantly aware of correct body alignment.
  - Ensure proper draping of patient (e.g., sheet or towel between the patient's legs).
  - If the patient is on mechanical ventilation, transfer to the ventilator side and closely monitor tubing length to prevent tugging.

SAFETY PRECAUTIONS

DANGERS

DANGER

- Equipment not suitable for use in the presence of a flammable anesthetic mixture with air, oxygen, or nitrous oxide.
- Do not use with Oxygen tents. Use oxygen administering equipment of the nasal, mask, or ventilator type only.
- This table should only be operated under the prescription and supervision of a licensed medical practitioner that is familiar with the precautionary measures and operational functions associated with the table being used.

- DO NOT connect the unit to an electrical supply without first verifying that the power supply is the correct voltage. Incorrect voltage may cause unit damage, malfunction, electrical shock, fire, or personal injury. Your unit was constructed to operate only on the electrical voltage specified on the Voltage Rating and Serial Number Plate. Contact your Chattanooga Group dealer if the unit is not properly rated.

- NiMH Batteries contain Class E Corrosive materials. In the event of battery cell rupture or leakage, handle battery housing wearing neoprene or natural rubber gloves. Contents of a ruptured or leaking battery can cause respiratory irritation. Hypersensitivity to nickel can cause allergic pulmonary asthma. Contents of cell coming in contact with skin can cause skin irritation and/or chemical burns.
- Use the Battery Backup only with the Moveo XP.

DANGER

- Never, under any circumstances, open the battery housing or cells. Should an individual cell from a battery become disassembled, spontaneous combustion of the negative electrode is possible. There can be a delay between exposure to air and spontaneous combustion.
- Charge the Battery Backup according to the instructions found in this manual. Never attempt to charge the Battery Backup on any other charging mechanism.
- Do not reverse the polarity of the Battery Backup. Doing so can increase the individual cell temperature and cause cell rupture or leakage.
- Dispose of NiMH batteries according to national, state and local codes and regulations.
- Never dispose of Battery Backup in fire. Never short circuit the battery. The battery may explode, ignite, leak or get hot causing serious personal injury.
- Do not move or elevate any cushion section while the patient's weight is on that section.
- Do not reposition or allow the patient to get on or off table while the table is in any position other than completely horizontal.
- Do not allow anything to be under the table while the table is descending.
- Do not make any adjustment to the table while the table is in any position other than completely horizontal.

SAFETY PRECAUTIONS

DANGERS (CONTINUED)

⚠ DANGER

Correct

- DO NOT adjust the angles of the Foot Plates while the patient has any weight resting on them.
- Both plungers (mechanical locking devices) on the Foot Plates should always be kept at an angle. When adjusting the Foot Plates, never allow the plungers to be straight up and down. Failure to observe this DANGER will result in tipping of Foot Plate and patient injury.

Incorrect

SAFETY PRECAUTIONS

INDICATIONS & CONTRAINDICATIONS

The Moveo XP is a dynamic tilt table that allows patients to participate in partial weight-bearing strength training for the preparation of functional mobility.

Indications

The Moveo XP is indicated for redeveloping muscles or restoring motion to joints.

Intended Uses

The table is intended for patients medically cleared by a physician to begin mobilization, but incapable of standing without maximal assistance from a therapist due to:

- Severe lower extremity weakness
- Poor postural control
- Decreased weight bearing tolerance
- Poor endurance
- Decreased LE ROM
- Poor muscle control
- Fear of falling due to weakened condition
- Risk of deep vein thrombosis

Benefits of the Moveo XP

- To increase lower extremity strength
- To increase knee and ankle ROM (Range of Motion)
- As an exercise device
- For graded weight bearing
- To optimize activity tolerance
- To promote urinary drainage
- For preambulatory activity

Contraindications

The Moveo XP has been contraindicated for the following:

- Patient has not been medically cleared by a physician to mobilize.
- Bilateral lower extremities have a "non-weight bearing" restriction.
- Patient with complete lower extremity paralysis.

Additional Precautions

Make certain that the patient is able to follow simple commands.

SETUP

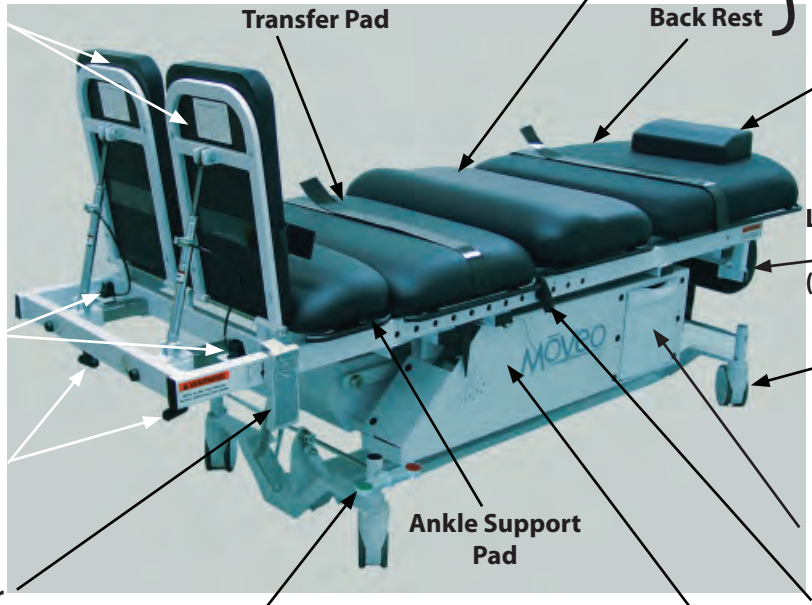
After removing top and side panels of shipping crate, you may notice metal bands and plastic straps. These are used to secure various sections of the table and must be removed.

⚠ CAUTION

- Do not lift table by Back Rest, Mid Section, or Foot Plates.
- Do not use any kind of lifting mechanism on the table.

NOMENCLATURE

TABLE



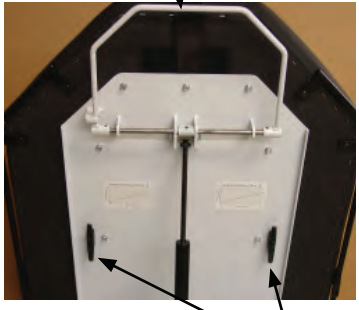


TABLE (CONTINUED)

Head Rest
During exercise, the Head Rest pillow supports the head and neck of the patient.

LE Support Pad (Optional)
The LE (Lower Extremity) Support Pad is an optional accessory that allows patients with a single amputated or exercise-restricted lower extremity to perform exercises.

Storage Drawer
The Storage Drawer is used to keep accessories for the table such as Cando Exercise Bands and Cando Handles.

Side Panel
The Side Panels display the Moveo XP logo and conceal the cords and mechanical and electrical working parts of the table.

⚠ WARNING

- The Carriage must be locked with the Key Pins before transferring patients to and from the table. See **page 26** for more information about locking the Carriage.
- Do not lock the Carriage when the table is inclined at any angle. The table must be completely horizontal before locking.

Key Pin
The Key Pins serve to prevent the carriage from sliding past a certain point, or to prevent the carriage from moving at all.

Ankle Support Pad
These pads provide comfortable support for the patient before, during, and after exercise.

NOMENCLATURE

TABLE (CONTINUED)

Caster
Four independently moving caster wheels allow the table to be positioned close to the patient's bed or wheelchair before transfer and away from the patient's bed before exercise. Depending on the position of the Caster Lock Bar, the casters have the following three settings:

All Free
All 4 casters move independently and turn in all directions. The Caster Lock Bar will be in the horizontal position.

All Locked
All 4 casters are locked. To lock the casters, step on the part of the Caster Lock Bar closest to the Head Section (Red).

3 free/1 locked
All 4 casters roll, but one is locked so that the table rolls either straight forward or straight back. To use this setting, step on the part of the Caster Lock Bar closest to the Foot Plates (Green).

Caster Lock Bar
Depending upon the side of the Caster Lock Bar on which you step, you can choose to lock the wheels and prevent the table from moving during patient transfer and exercise and unlock the wheels for table transport.

Foot Plate Lock Knob
The practitioner uses the Foot Plate Lock Knob to lower the Foot Plates when using the LE Support Pad.

Foot Plate Release
While holding the Foot Plate with one hand, the practitioner can use a finger of the free hand to pull the Foot Plate Release lever to position the Foot Plates and allow for the appropriate angle.

NOMENCLATURE

TABLE (CONTINUED)

Foot Plates
The Foot Plates allow the practitioner to vary the angle to allow for the appropriate foot position, and also provide support for the patient during exercise.

Transfer Pad
The transfer pad supports the middle thigh and calf areas during transfer.

Carriage
The carriage consists of both the Pelvic Section and Back Rest and is the main operational component of the Moveo XP. The sliding motion of the carriage is what allows patients to use their own weight to exercise.

Pelvic Section
The Pelvic Section serves as the lower operational component of the Moveo XP and supports the patient's lower back.

Back Rest
Patients use the large surface area of the Back Rest to support their arms, head, and torso during exercise.

Cando Exercise Band Winding Cleats
Using these cleats, the practitioner can either tie a band to each cleat or use a single band that passes through both cleats to allow the patient to exercise. When not in use, wind the Cando Exercise Bands around the cleat to keep them close at hand, but out of the way.

Back Rest Release Bar
While holding the Back Rest Release Bar, the practitioner can position the Back Rest to allow for the incline angle. Simply release the bar to lock the Back Rest into place.

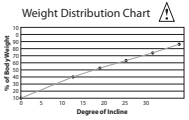
TABLE (CONTINUED)

Battery Backup (Optional - Not Shown)

The Battery Backup is an optional accessory that allows the practitioner to administer exercise therapy without having to plug the table into an outlet. To recharge the Battery Backup, simply plug it into an outlet. The Battery Backup will charge whenever the table is plugged in.

NOMENCLATURE

TABLE SYMBOL DEFINITIONS



The purpose of the Weight Distribution Chart is to illustrate the correlation between the patient's body weight percentage and the degree of incline on the Moveo XP. For more information on this chart, **see page 23**.

12 11 10 9 8 7 6 5 4 3 2 1

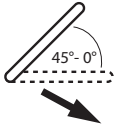
Key Pin Adjustment Numbers (Right Side)

1 2 3 4 5 6 7 8 9 10 11 12

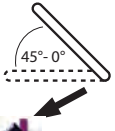
Key Pin Adjustment Numbers (Left Side)

Key Pin Location for securing Carriage (Right Side)

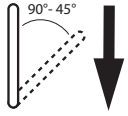
Key Pin Location for securing Carriage (Left Side)



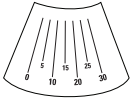
Foot Plate Adjustment for LE Support Pad (Right Side)



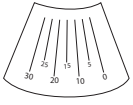
Foot Plate Adjustment for LE Support Pad (Left Side)



Foot Plate Adjustment



Angle of Incline (Left Side)

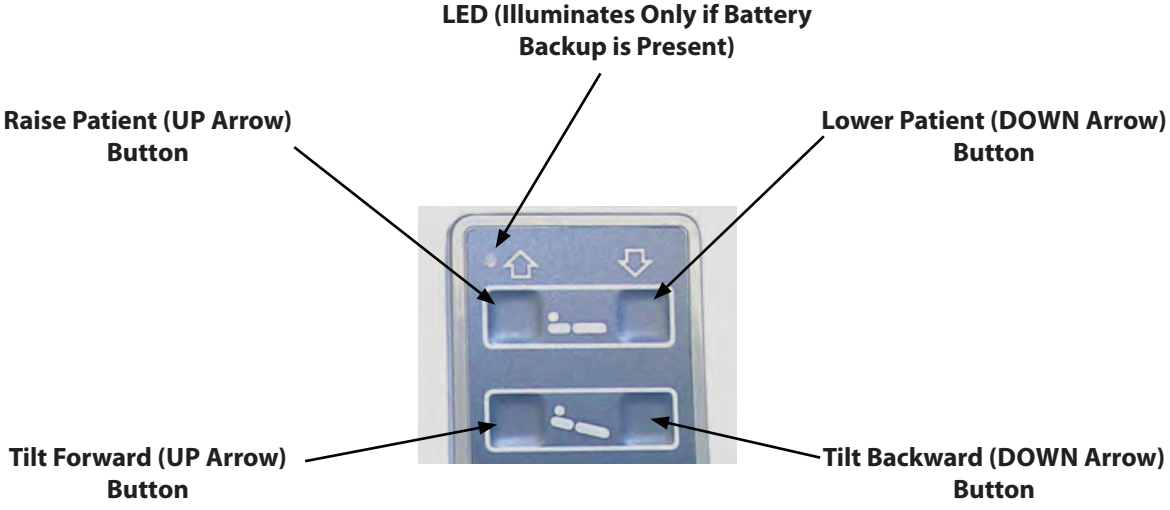


Angle of Incline (Right Side)

Pinch Point

NOMENCLATURE

HAND CONTROLLER



Elevation

Tilt

NOMENCLATURE

HAND CONTROLLER SYMBOL DEFINITIONS

LED

The LED (Light Emitting Diode) illuminates only if the Battery Backup is present.

The LED:

- illuminates green when the Battery Backup is charging and you press a button on the Hand Controller.
- illuminates green when you press a button on the Hand Controller and the Battery Backup is fully charged.
- flashes green when the Battery Backup is charging and the table is idle.
- illuminates orange and emits a "beep" when you press a button on the Hand Controller and the charge on the Battery Backup is weak.
- flashes orange and emits a "beep" when you press a button on the Hand Controller and the charge on the Battery Backup is very weak.

Raise Patient (UP Arrow) Button

Press the ↑ button to elevate the table. The maximum elevation is 97.79 cm (38.5 in).

Tilt Forward (UP Arrow) Button

Press the ↑ button to tilt the table forward. The maximum tilt angle is 30°.

Tilt Backward (DOWN Arrow) Button

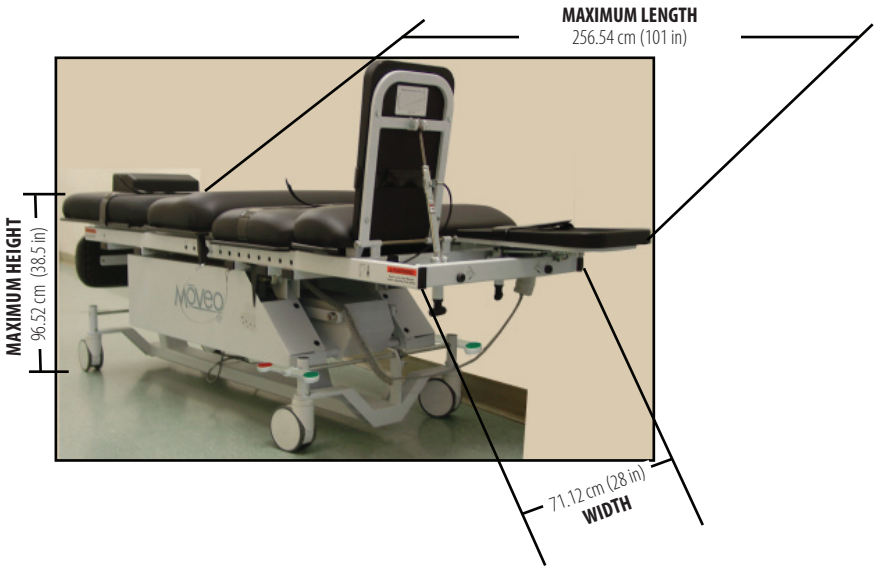
Press the ↓ button to tilt the table backward.

Lower Patient (DOWN Arrow) Button

Press the ↓ button to lower the table. The table can be lowered to a height of 57.15 cm (22.5 in).

SPECIFICATIONS

TABLE



Technical Data	120 V & 230 V
Voltage/Frequency	120 VAC 60 Hz, 230 V 50 Hz
Current Consumption	2.5 A, 1.3 A
Output Voltage	24 VDC
Maximum Output Current	18 A
Electrical Safety Classification	Class 1
Duty Cycle	1 min/9 min Intermittent
Degree of Protection Against Electrical Shock	Type B
Weight	185.97 kg (410 lb)
Length (with Foot Plates down)	256.54 cm (101 in)
Length (with Foot Plates up)	233.68 cm (92 in)
Length (with Foot Plates up and LE Support Pad removed)	215.9 cm (85 in)
Length (with Foot Plates up, LE Support Pad removed, and Transfer Pad removed)	199.39 cm (78.5 in)
Height Range	57.15-97.79 cm (22.5-38.5 in)
Tilt Range	0-30°
Compliance	Classified by Intertek Testing Services NA Inc. Conforms to UL Standard 60601-1 Certified to CAN/CSA Standard C22.2 No. 601.1-M90 w/A2 Meets Directive 93/42/EEC. Compliant to IEC/EN 60601-1, IEC 60601-1-2

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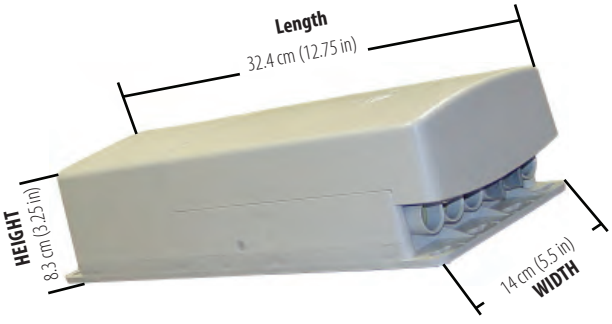
SPECIFICATIONS

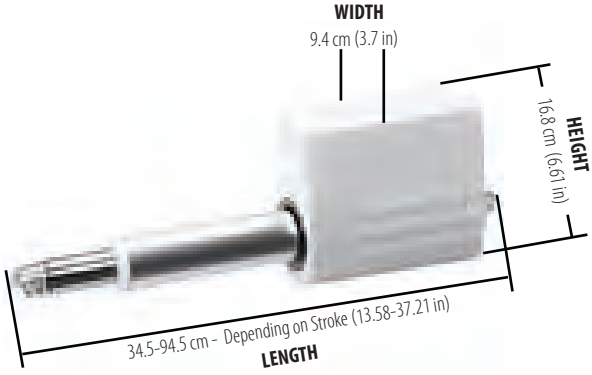
CONTROL UNIT



Technical Data	120 V	230 V
Voltage/Frequency	120 VAC 60 Hz	230 VAC 50 Hz
Current Consumption	2.5 A	1.3 A
Output Voltage	24 VDC	24 VDC
Maximum Output Current	18 A	18 A
Duty Cycle	1 min/9 min Intermittent	1 min/9 min Intermittent
Electrical Safety Classification	Class 1	Class 1
Degree of Protection Against Electrical Shock	Type B	Type B
Weight	2.3 kg (5.07 lb)	2.3 kg (5.07 lb)

SPECIFICATIONS

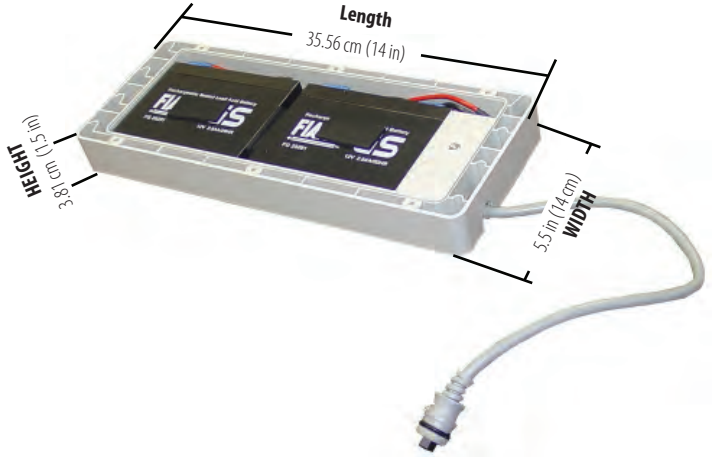
MOTOR



Technical Data (120 V & 230 V)	
Push Force	12000 N
Pull Force	8000 N
Speed (at full load)	4.5 mm/sec (0.177 in/sec)
Stroke	10-70 cm (3.94-27.56 in)
Voltage	24 V
Current	7 A
Duty Cycle (on/off)	1 min/9 min Intermittent
Electrical Safety Classification	Class 1
Degree of Protection Against Electrical Shock	Type B
Weight	5.7 kg (12.57 lb)

SPECIFICATIONS

BATTERY BACKUP



Technical Data (120 V & 230 V)	
Type of Battery	NiMH
Input	24 V
Output	24 V
Rated Capacity	4.5 Ah
Internal Resistance	~ 35 milli ohms
Maximum Discharge Current	40 A
Charging Voltage (Standby)	-20 mV/deg C (13.5-13.8 V)
Charging Voltage (Cycle Use)	-15 mV/deg C (14.4-15.0 V)
Maximum Charging Current	1.35 A
Electrical Safety Classification	Class 1
Degree of Protection Against Electrical Shock	Type B
Protection	Internally Powered
Mode of Operation	Continuous
Power Cord	18 AWG, 43.18 cm (17 in), Unshielded
Weight	1.75 kg (3.86 lb)

SPECIFICATIONS

DESCRIPTION OF DEVICE MARKINGS

The markings on the Moveo XP are assurance of its conformity to the highest applicable standards of medical equipment safety and electromagnetic compatibility. The following markings appear on the device:

Listed by Intertek Testing Services NA Inc.
Conforms to UL Standard 60601-1
Certified to CAN/CSA Standard C22.2
No. 601.1-M90 w/A2

Meets Directive 93/42/EEC.
Compliant to IEC/EN 60601-1, IEC 60601-1-2

Refer to ACCOMPANYING DOCUMENTS

Degree of Protection Against Electrical Shock
Type B

Dangerous Voltage

Explosion Hazard

EU Directive on Waste Electrical and Electronic Equipment (WEEE), ensures that product is appropriately disposed of or recycled at the end of its life.

For indoor use only

UL (Underwriters Laboratory) recognized

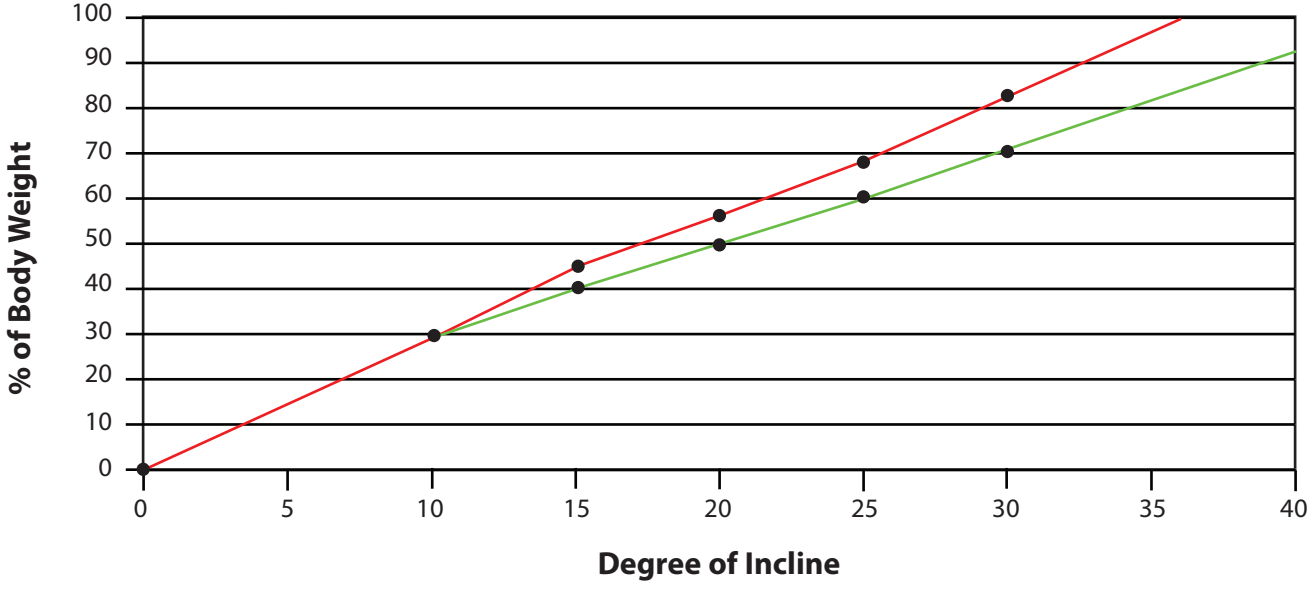
Double Insulated

Corrosive

WEIGHT DISTRIBUTION CHART (FOR REFERENCE ONLY)

The purpose of the Weight Distribution Chart is to illustrate the correlation between the patient's body weight percentage and the degree of incline on the Moveo XP.

The Weight Distribution Chart is for reference only. The appropriate exercise session should be based on the requirements and assessment of the individual patient.



Top Line: Patient weighing approx. 68.04 kg (150 lb)
Bottom Line: Patient weighing approx. 79.38-90.72 kg (175-250 lb)

TRANSFERRING THE PATIENT TO THE TABLE

To transfer the patient from a hospital bed to the Moveo XP, do the following:

1. Make certain the patient is aware of all procedures performed.
2. Position patient in the supine position with the draw sheet extending from mid-thigh to above the shoulders.

3. Using the Foot Plate Release, adjust the Foot Plates so that they are at their maximum angle (45°).

TRANSFERRING THE PATIENT TO THE TABLE (CONTINUED)

4. Using the DOWN Arrow button on the Hand Controller, position the Moveo XP so that it is completely horizontal.

5. Make certain the transfer cushion is in place.

6. Align the carriage pivot point to the patient's hip joint (greater trochanter).

   NOTE: For tall patients, it may be necessary to move the carriage up on the rails so that the patient's feet do not make contact with the Foot Plates.

TRANSFERRING THE PATIENT TO THE TABLE (CONTINUED)

7. Lock carriage on right side by inserting the Key Pin in the hole directly below the rubber stop.

8. Lock carriage on left side by inserting the Key Pin in the hole directly above the rubber stop.

9. Using the Hand Controller, press the UP Arrow button to adjust the height of the Moveo XP to the exact height of the bed.

10. Position the Moveo XP so that it is flush against the patient's bed.

    NOTE: Transport the Moveo XP by pushing the Foot Plates.

11. Unfasten all straps on the Moveo XP.

TRANSFERRING THE PATIENT TO THE TABLE (CONTINUED)

12. Step on the side of the Caster Lock Bar closest to the Head Section to lock the casters (Red).

13. Make sure the patient's arms are crossed over the chest and the patient's chin is tucked.

14. Using at least two people (one on each side), lift the patient up with draw sheet and transfer the patient to the Moveo XP.

TRANSFERRING THE PATIENT TO THE TABLE (CONTINUED)

15. Ensure that the draw sheet does not hang below the carriage and fasten the safety strap around the patient's waist.

16. Using the Back Rest Release Bar, raise the Back Rest to the appropriate or most comfortable position for the patient.

17. Step on the Caster Lock Bar (so that the Caster Lock Bar is completely horizontal) to unlock the casters.

18. Position the Moveo XP away from the patient's bed or wheelchair.

NOTE: Transport the Moveo XP by using the Foot Plates.

TRANSFERRING THE PATIENT TO THE TABLE (CONTINUED)

19. Step on the side of the Caster Lock Bar closest to the Head Section to lock the casters before beginning exercise (Red).

STARTING, INTERRUPTING, AND STOPPING THE EXERCISE

⚠ WARNING

- Patient must be cleared by a physician for mobilization.
- Before, during, and after exercise, keep in mind the following:
  - Monitor vital signs closely (i.e., heart rate, oxygen saturation, blood pressure, and respiratory pattern).
  - Monitor rate of perceived exertion and watch for outward signs of distress.
  - Be constantly aware of correct body alignment.
  - Ensure proper draping of patient (e.g., sheet or towel between the patient's legs).
  - If the patient is on mechanical ventilation, transfer to the ventilator side and closely monitor tubing length to prevent tugging.

Starting the Exercise

To begin using the Moveo XP, do the following:

1. Record the patient's blood pressure, heart rate, oxygen saturation, and respiration rate.
2. Remove the Transfer Cushion from the table.

STARTING, INTERRUPTING, AND STOPPING THE EXERCISE (CONTINUED)

3. Pull out both left and right Key Pins so that the carriage moves freely.

4. Position the carriage so that the patient's ankles are on the ankle support pad.

5. Using the Foot Plate Release, adjust the Foot Plates to the appropriate angle.

STARTING, INTERRUPTING, AND STOPPING THE EXERCISE (CONTINUED)

6. Strap the patient's feet to the Foot Plates.

7. Place the right Key Pin in the appropriate hole to allow for a shallow, practice squat.

8. Place the left Key Pin in the same hole on the left side.

9. Using the UP Arrow button on the Hand Controller, incline the patient to a 10° angle.

NOTE: The table must be raised at least 4 inches (from the lowest height) before it can be tilted.

10. Explain to the patient how to perform a slow, controlled squat.

11. Have the patient demonstrate the exercise.

STARTING, INTERRUPTING, AND STOPPING THE EXERCISE (CONTINUED)

12. Place the right Key Pin in the appropriate hole for the desired amount of knee flexion (carriage travel), but no more than 90° of knee flexion.

13. Place the left Key Pin in the same hole on the left side.

⚠ CAUTION

DO NOT lock the carriage while the table is inclined.

14. Using the UP Arrow button on the Hand Controller, incline the patient to an appropriate angle in order to perform a series of slow, controlled squats.

15. Instruct the patient to begin the exercise.

16. Continuously monitor the patient for signs of distress and allow appropriate rest periods. If distress or discomfort occurs, discontinue the treatment and take the appropriate actions.

STARTING, INTERRUPTING, AND STOPPING THE EXERCISE (CONTINUED)

Interrupting the Exercise

To interrupt the exercise, do the following:

1. For rest periods, decline the table to 0° and keep the Key Pins in the same place.
2. Discontinue exercise in the event of the following:
   - Excessive increase in heart rate or blood pressure
   - Signs of cardiovascular distress
   - No change or decrease in heart rate or blood pressure with signs of cardiovascular distress
   - Oxygen saturation is less than 90%
   - Unacceptable respiratory pattern with signs or symptoms of respiratory distress

Stopping the Exercise

To complete the exercise, do the following:

1. Using the UP Arrow button on the Hand Controller, return the table to 0° (completely horizontal).
2. Place the right Key Pin in the appropriate hole to allow for a shallow, practice squat.
3. Place the left Key Pin in the same hole on the left side.

STARTING, INTERRUPTING, AND STOPPING THE EXERCISE (CONTINUED)

4. Replace the Transfer Cushion.

5. Lock carriage on right side by inserting the Key Pin in the hole directly below the rubber stop.

6. Lock carriage on left side by inserting the Key Pin in the hole directly above the rubber stop.

7. Step on the Caster Lock Bar (so that the Caster Lock Bar is completely horizontal) to unlock the casters.

STARTING, INTERRUPTING, AND STOPPING THE EXERCISE (CONTINUED)

8. Lower the Back Rest and put the patient into the supine position.

9. Unfasten all straps on the Moveo XP.

10. Position the Moveo XP so that it is flush against the patient's bed.

11. Using the Hand Controller, press the UP Arrow button to adjust the height of the Moveo XP to the exact height of the bed or wheelchair.

12. Step on the side of the Caster Lock Bar closest to the Head Section to lock the casters (Red).

13. Lower the back and foot rest of the hospital bed to the horizontal position.

14. Position the draw sheet extending from mid-thigh to above the shoulders.

15. Using the draw sheet, transfer the patient to the hospital bed.

USING THE LE SUPPORT PAD

The LE Support Pad should be used:

- For patients with a below-knee amputation.
- For patients with a unilateral LE weight-bearing restriction.
- For patients with hemiparesis. The LE Support Pad is used for muscle re-education of the affected lower extremity. The LE Support Pad supports the unaffected lower extremity in this application.

To use the LE Support Pad, do the following:

1. Follow the procedures necessary for transferring the patient to the table on **pages 24-29**.
2. When the patient is positioned on the table, lift the extremity and insert the square post of the LE Support Pad into the square hole of the carriage. For more information about positioning the patient on the table, **see steps 2-18 on pages 24-29**.

3. Using the safety strap, secure the lower extremity to the LE Support Pad.

USING THE LE SUPPORT PAD (CONTINUED)

4. Using the Foot Plate Release, adjust the occupied Foot Plate to 45°.
5. Using the Foot Plate Lock Knob, completely lower the unoccupied Foot Plate.
6. To perform the exercise, follow **steps 3-16 on pages 31-33**.

7. When the exercise is complete, raise the lower extremity and remove the LE Support Pad.
8. Follow the steps listed in "Interrupting the Exercise" and "Stopping the Exercise" on **pages 34-36**.

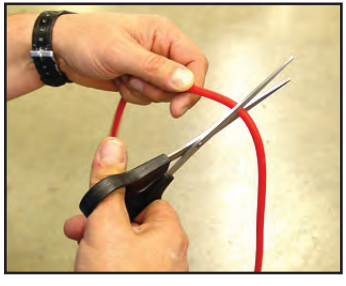
USING THE CANDO® EXERCISE BANDS

Exercise band therapy is the most commonly prescribed exercise modality for rehabilitation, conditioning and training. The boxes of Cando exercise bands are color-coded to resistance level and design-coded to indicate whether the box contains low-powder or no-latex exercise band. Low-Powder Cando exercise band is a high-quality latex exercise band formulated to prevent excess powder during use. No-Latex Cando exercise band is formulated for those people who may have a latex sensitivity.

⚠CAUTION

The Cando exercise bands offered as an accessory to this table contain dry natural rubber and may cause allergic reactions in patients with allergies to latex.

To use the Cando exercise bands in conjunction with the Moveo XP, do the following:



1. Assess the appropriate type and resistance level for the patient.
2. With a pair of scissors, cut the exercise band to the appropriate length.

USING THE CANDO® EXERCISE BANDS (CONTINUED)

3. Attach the exercise bands to the Cando Exercise Band Winding Cleats located on the Back Rest, or run 1 single band through both.
4. If applicable, attach the Cando Handles to the free ends of the exercise bands.
5. Give the patient the free ends of the exercise bands (with or without handle).
6. To perform the exercise, follow **steps 3-16 on pages 31-33**.
7. Follow the steps listed in "Interrupting the Exercise" and "Stopping the Exercise" on **pages 34-36**.

TREATMENT TIPS

Exercise Considerations

Depending on the assessed needs of the patient, different techniques can be used to achieve the appropriate results. Use the following tips as guidelines only:

Strength Training

For patients requiring exercise to build strength, use an exercise regimen that includes the following:

- High Load, low repetitions of inclined squats and heel lifts.
- Slow contractions (e.g., 5 to 10 seconds of concentric and eccentric contractions).
- Static standing while performing upper extremity exercise or activities of daily living (e.g., brushing hair, washing face, and elastic band or tubing exercises for upper extremity strengthening).

Flexibility

For patients requiring exercise to increase flexibility, use an exercise regimen that includes the following:

- Heel cord stretching - static standing with platforms at neutral or in dorsiflexion.
- Knee flexion stretching. Use a sheet between platforms for patient-assisted stretching. Hold maximum flexion for 10 to 30 seconds.
- For increased hip extension during inclined squats, decrease Back Rest angle.

Endurance Training

For patients requiring exercise to increase endurance, do the following:

- Use a low load and high repetition regimen.

Forced-Use Training

For patients requiring forced exercise or rehabilitation, do the following:

- Start with shallow, controlled squats (e.g., 30° knee flexion) and achievable amounts of resistance.
- Progress to deeper squats at same resistance level.
- When achievable, increase incline angle and revert to shallow squats.

TREATMENT TIPS (CONTINUED)

- For muscle re-education, use manual cuing or a pillow between the patient's legs to facilitate the adductors and quadriceps co-contraction.

Discontinuing the Moveo XP Exercises

Discontinue the use of Moveo XP exercises when the patient is able to safely stand with minimal to moderate assistance from a therapist. You may choose to progress to functional mobility and pre-gait activities.

Documenting the Exercises

During exercise, you should always document the following patient information:

- Repetitions, incline, and length of treatment time.
- Vital signs.
- Range of motion limit.

Patient Tolerance

During exercise, you should ask yourself "is the patient tolerating the activity?" To answer this question, use the following guidelines (from Stiller K, Phillips A. *Safety Aspects of Mobilizing Acutely Ill Inpatients. Physiotherapy Theory and Practice* 2003; 19: 239-257):

Yes

The answer is "Yes" if the following are true:

- Appropriate incremental increase in heart rate.
- Initial rise in systolic blood pressure.
- Stable or slight increase in diastolic blood pressure.
- Consistent sinus rhythm.
- Oxygen saturation greater than 90%.
- Acceptable respirator pattern.
- Patient appears un-stressed.

TREATMENT TIPS (CONTINUED)

If the answer is "Yes," continue exercise session and increase intensity as tolerated.

Unsure

The answer is "Unsure" if the following are true:

- Excessive increase in heart rate.
- Excessive increase in blood pressure.
- Increasing ectopic beats or arrhythmias.
- Oxygen saturation less than 90%.
- Unacceptable respiratory pattern.

If the answer is "Unsure," decrease the intensity of exercise by decreasing the incline of the table. If patient's vital signs stabilize, continue the exercise session. If the patient's vital signs do not stabilize, discontinue the exercise.

No

The answer is "No" if the following are true:

- Excessive increase in heart rate or blood pressure with signs of cardiovascular distress.
- No change or increase in heart rate or blood pressure with signs of cardiovascular distress.
- Oxygen saturation less than 90%.
- Unacceptable respiratory pattern with signs and symptoms of respiratory distress.

If the answer is "No," do the following:

- Discontinue exercise session.
- Return the patient to the resting position.
- Monitor the patient until vital signs are stable.
- Seek assistance if necessary.
- Discuss with medical staff.

USING THE BATTERY BACKUP

The Battery Backup allows easy upgrade of the Moveo XP to create a battery powered table. The information in this section instructs the owner, operator, or user as to the initial set up and operation of the optional NiMH Battery Backup. No additional software is required for the Battery Backup as the table automatically recognizes its presence and activates all necessary functions.

⚠ WARNING

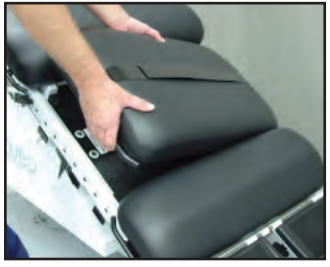
Disconnect the table from the power source (outlet or remove Battery Backup if installed) before attempting any maintenance, installation, removal, or replacement procedures to prevent electrical shock and possible damage to table.

Installing the Battery Backup

To install the Battery Backup, do the following:

1. Step on the side of the Caster Lock Bar closest to the Head Section to lock the casters.
2. Using the Hand Controller, press the UP Arrow buttons to adjust the height and angle of the Moveo XP to the maximums so that you will have enough area to work.

USING THE BATTERY BACKUP (CONTINUED)



3. Remove the Transfer Pad.

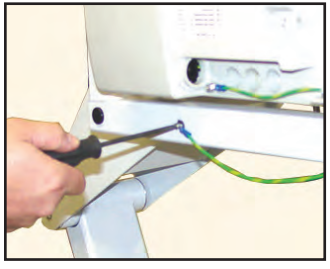
4. Remove all 10 black retaining clips from the side panel.

5. Remove the Side Panel.

USING THE BATTERY BACKUP (CONTINUED)

6. Using a coin or flat blade screwdriver, turn the slot on the controller to the unlock position and remove the cover.

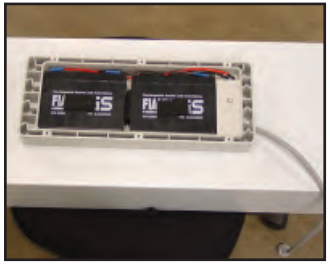
7. Disconnect all plugs from the controller.



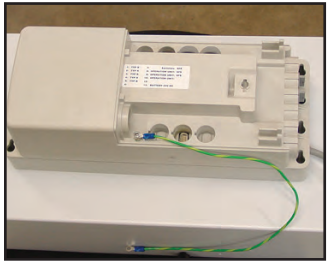
8. Using a Phillips head screwdriver, remove the green ground screw from the frame of the table.

9. Using a Phillips head screwdriver, remove the 4 screws that secure the controller and discard the screws.

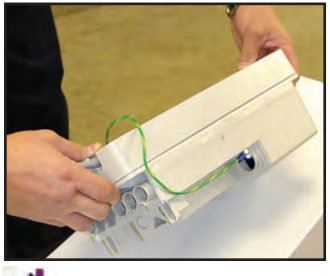
USING THE BATTERY BACKUP (CONTINUED)



10. Place the Battery Backup on a flat surface so that the batteries are visible.

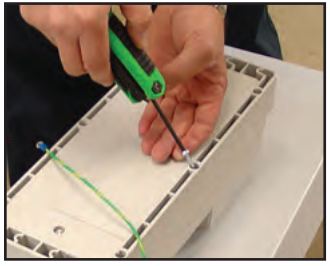


11. Place the controller on the Battery Backup so that the connections for the controller are on the same end as the power cord for Battery Backup.



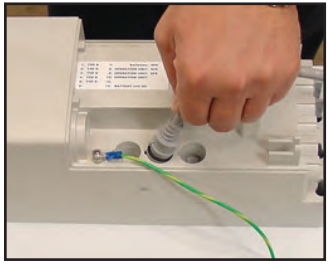
12. While holding them together, flip over the controller and Battery Backup.

USING THE BATTERY BACKUP (CONTINUED)

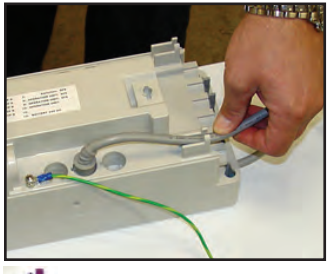


13. Connect the Battery Backup to the controller using the 6 star head screws (supplied) and star head screwdriver.

NOTE: Do not over-tighten the screws.



14. Insert the Battery Backup power cord into port 13 on the controller.



15. Push the Battery Backup power cord into the appropriate cord retaining clip.

USING THE BATTERY BACKUP (CONTINUED)

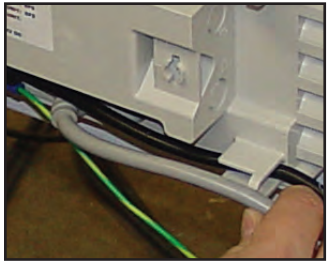
16. Using the 4 new Phillips head screws and nuts (supplied with the Battery Backup) and a Phillips head screwdriver, secure the controller and the Battery Backup to the table.

NOTE: Do not over-tighten the screws.

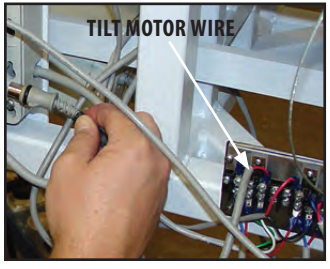
17. Reconnect the Hand Controller plug into port 9 and press the cord into the appropriate retaining clip.

18. Reconnect the Power Cord plug into port 11.

USING THE BATTERY BACKUP (CONTINUED)

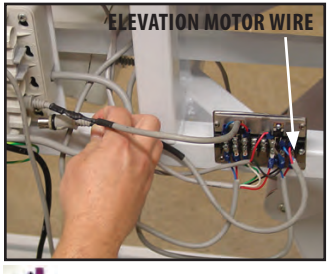


19. Press the Power Cord, Battery Backup power cord, and the green ground wire into the same retaining clip.



20. Reconnect the Tilt Motor plug into port 2.

The Tilt Motor cord and plug are connected to the left side of the motor board.



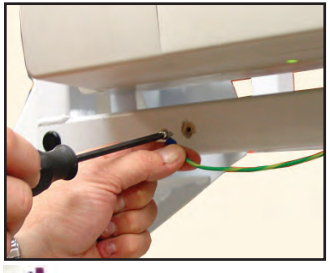
21. Reconnect the Elevation Motor plug into port 1.

The Elevation Motor cord and plug are connected to the right side of the motor board.

USING THE BATTERY BACKUP (CONTINUED)

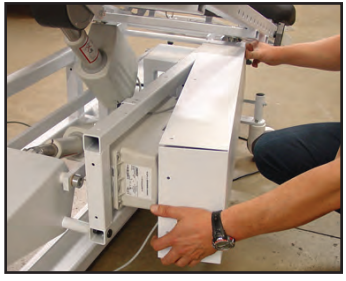
22. Re-attach the controller cover.

23. Using a coin or flat blade screwdriver, turn the slot on the controller to the lock position.

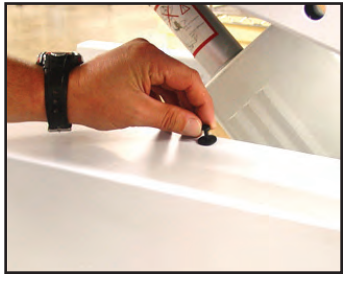


24. Using a Phillips head screwdriver, secure the green ground wire with the screw.

USING THE BATTERY BACKUP (CONTINUED)



25. Re-attach the Side Panel.



26. Press all 10 black retaining clips into the side panel.

USING THE BATTERY BACKUP (CONTINUED)

Charging The Battery Backup

To charge the Battery Backup, do the following:

1. After installing the Battery Backup (**pages 44-52**), make sure the table is plugged into a power outlet. This allows the Battery Backup to charge, even during use.
2. Allow the Battery Backup to charge for 7 hours before the first use.

Charging Temperature

Charging efficiency is optimum within a temperature range of 10 °C to 30 °C (50 °F to 86 °F). Charge the Battery Backup within this temperature range.

⚠ WARNING

- At temperatures below 0 °C (32 °F), the gas absorption reaction is not sufficient and causes an increase of the gas pressure inside the battery. This condition can activate the safety vent and lead to alkaline gas leaking and battery performance deterioration.
- Charging efficiency of the Battery Backup drops at temperatures above 40 °C (104 °F) and can disrupt full charging and lead to deterioration in performance and battery cell leakage.

Battery Backup Service Life

Since NiMH Batteries are designed for multiple cycles of charging and discharging, the expected cycle life of the Battery Backup is at minimum 500 cycles utilizing proper discharging and charging procedures.

When the service time (use time between charges) of the Battery Backup is significantly reduced, the service life of the Battery Backup is

USING THE BATTERY BACKUP (CONTINUED)

exceeded and should be replaced with a new Chattanooga Group Battery Backup.

Never attempt to rebuild the Battery Backup.

Properly dispose of old Battery Backup.

Storage of Battery Backup

When storing the Battery Backup, there are guidelines to follow in terms of long term and short term storage.

Short Term

⚠CAUTION

The Battery Backup should be operated, transported, and stored in temperatures between 15 °C and 40 °C (59 °F and 104 °F), with Relative Humidity ranging from 30%-60%.

Long Term Storage

For long term storage of the Battery Backup, remove the Battery Backup from the table and store in temperatures between 15 °C and 40 °C (59 °F and 104 °F), with Relative Humidity ranging from 30%-60%.

When charging the Battery Backup for the first time after long term storage, restore the battery service life by charging and discharging the Battery Backup several times.

If storing the Battery Backup for periods longer than one year, charge the Battery Backup at least once per year to prevent performance deterioration and battery leakage due to self-discharge from storage.

ACCESSORIES

GENERAL INFORMATION

The following provides the users of the Moveo XP table the necessary information to order the replacement accessories most commonly used with the table. This list of replacement accessories is designed for use with the Moveo XP. When ordering, provide the respective part number, description, and quantity desired.

Standard Accessories

Ref.	Description
80911	User Manual CD
80985	Hand Controller [26 AWG, 32 in (81 cm), Unshielded]
80919	Head Rest
80951	Head Rest Strap
	One of the following:
21284	• Power Supply Cord (Euro) [18 AWG, 80 in (203.2 cm), Shielded]
27325	• Power Supply Cord (US) [18 AWG, 80 in (203.2 cm), Shielded]
20971	• Power Supply Cord (Australian) [18 AWG, 80 in (203.2 cm), Shielded]
20972	• Power Supply Cord (Swiss) [18 AWG, 80 in (203.2 cm), Shielded]
20973	• Power Supply Cord (UK) [18 AWG, 80 in (203.2 cm), Shielded]
20974	• Power Supply Cord (Danish) [18 AWG, 80 in (203.2 cm), Shielded]
20975	• Power Supply Cord (Japanese) [18 AWG, 80 in (203.2 cm), Shielded]
20976	• Power Supply Cord (Indian) [18 AWG, 80 in (203.2 cm), Shielded]
20977	• Power Supply Cord (Israeli) [18 AWG, 80 in (203.2 cm), Shielded]

Optional Accessories

Ref.	Description
80986	Battery Backup
80896	LE Support Pad
10-5211	Cando Exercise Bands - Yellow, 6 yds, latex, low powder
10-5330	Cando Handles (2)

CLEANING

After each use, clean the table using a soft cloth dampened with water and a mild antibacterial detergent or hospital-approved detergent.

PREVENTATIVE MAINTENANCE

The Moveo XP should be placed on a regular maintenance and inspection schedule based on the practices of the health care facility.

Inspect the locking brake mechanism (at least) on an annual basis for signs of wear. If any signs of wear are observed, replace the mechanism immediately.

SERVICE

⚠ WARNING

Disconnect the table from the power source (outlet or remove Battery Backup if installed) before attempting any maintenance, installation, removal, or replacement procedures to prevent electrical shock and possible damage to table.

Regularly monitor the proper operation of the table, making sure to note any worn or wearing parts. The table should be professionally inspected on an annual basis.

Should the Moveo XP require service, contact the selling dealer or Chattanooga Group Service Department. All returned tables to the factory for service must include the following:

WARRANTY REPAIR/OUT OF WARRANTY REPAIR

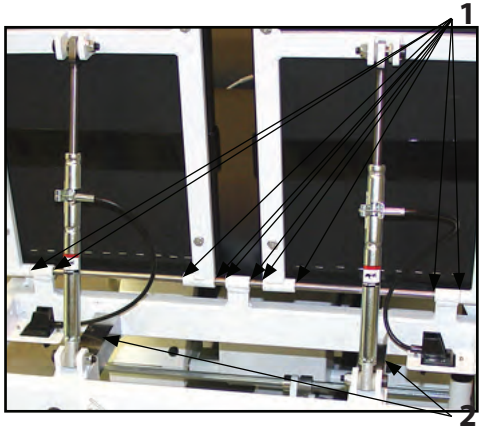
1. Written statement containing the following information:
   - RA Number - Obtain from Factory
   - Table Model Number
   - Table Serial Number
   - Contact person with Phone and Fax Numbers
   - Billing Address (for Out of Warranty Repair)
   - Shipping Address (Where to Ship Table after Repair)
   - Detailed Description of Problem or Symptoms
2. Copy of original invoice issued at purchase of the table.
3. Contact Chattanooga Group:
   4717 Adams Road
   Hixson, TN 37343 USA
   +1 (423) 870-7200
   +1 (423) 870-2046

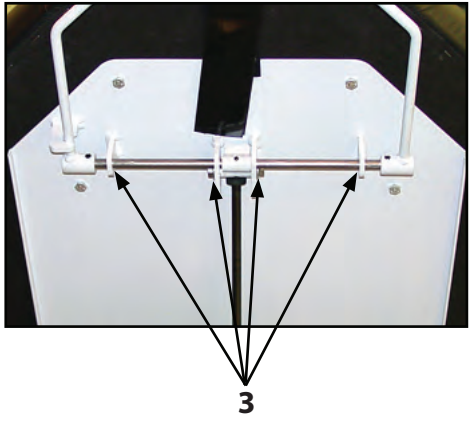
Service to these tables should be performed only by Service Technicians certified by Chattanooga Group.

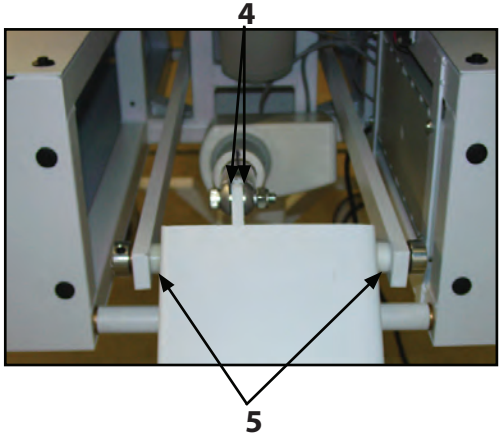
Chattanooga Group will make available, upon request, circuit diagrams, component part lists, descriptions, calibration instructions, or other information which will assist the user's appropriately qualified technical personnel to repair those parts of equipment which are designated by the manufacturer as repairable.

LUBRICATION

At least once a year, the Moveo XP should be thoroughly inspected by a person qualified to recognize any signs of wear and tear, and looseness of bolts or parts. Replace any worn parts immediately.







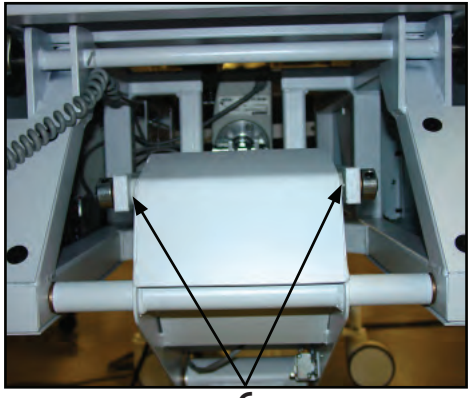
The Moveo XP should be lubricated at needed.

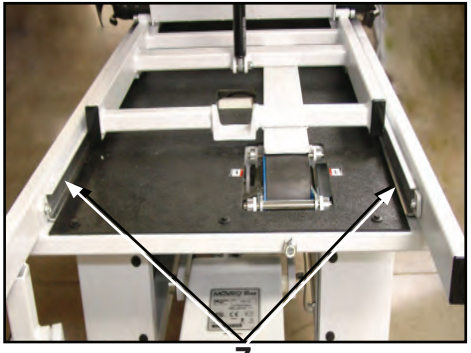
To lubricate, put a drop of oil on the following points of the Moveo XP as needed:

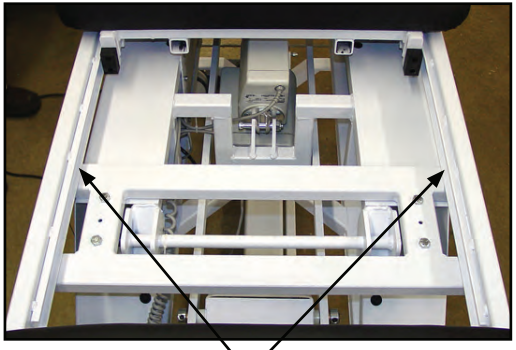
NOTE: To lubricate the table, use a light machine oil. Do not use a penetrating type of lubricant.

1. Foot Plate Pivot Rod - Ten places.
2. Foot Plate Adjustment Slide - Two places.
3. Back Rest Gas Spring Release Handle - Four places.
4. Back Rest Elevation Motor Mount - Two places.
5. Back Rest Lift Arm Bushing - Two places.

LUBRICATION (CONTINUED)


6


7


8

To lubricate, put a drop of oil on the following points of the Moveo XP as needed:

NOTE: To lubricate the table, use a light machine oil. Do not use a penetrating type of lubricant.

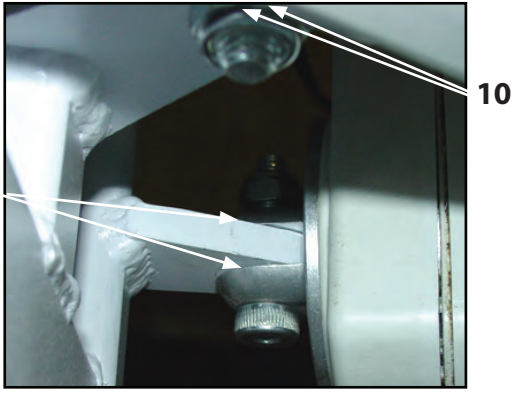
6. Foot Plate Elevation Motor Bushing - Two places.

NOTE: For Items seven and eight only, use a type of grease (ex. lithium grease) to lubricate the carriage channels.

7. Rear Carriage Channels - Entire length of Carriage Channel.

8. Front Carriage Channels - Entire length of Carriage Channel.

LUBRICATION (CONTINUED)



To lubricate, put a drop of oil on the following points of the Moveo XP as needed:

NOTE: To lubricate the table, use a light machine oil. Do not use a penetrating type of lubricant.

9. Back Elevation Motor Mount - Two places.

10. Back Tilt Motor Mount - Two places.

WARRANTY

Chattanooga Group ("Company") warrants that the Moveo XP ("Product") is free of defects in material and workmanship. This warranty shall remain in effect for two years (24 months) from the date of original consumer purchase. If this Product fails to function during the two-year warranty period due to a defect in material or workmanship, at the Company's option, the Company or the selling dealer will repair or replace this Product without charge within a period of thirty (30) days from the date on which the Product is returned to the Company or the dealer.

All repairs to the Product must be performed by a service center authorized by the Company. Any modifications or repairs performed by unauthorized centers or groups will void this warranty.

This Warranty Does Not Cover:

- Replacement parts or labor furnished by anyone other than the Company, the selling dealer or a certified Company service technician.
- Defects or damage caused by labor furnished by someone other than Company, the selling dealer or a certified Company service technician.
- Any malfunction or failure in the Product caused by product misuse, including, but not limited to, the failure to provide reasonable and required maintenance or any use that is inconsistent with the Product User's Manual.

COMPANY SHALL NOT BE LIABLE IN ANY EVENT FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES.

Some locations do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.
To obtain service from company or the selling dealer under this warranty:

A written claim must be made within the warranty period to the Company or the selling dealer. Written claims made to the Company should be sent to:

4717 Adams Road
P.O. Box 489
Hixson, TN 37343 USA
Telephone: +1-423-870-7200
Fax: +1 423-870-2046

and

This warranty gives you specific legal rights and you may also have other rights which vary from location to location.
The Company does not authorize any person or representative to create for it any other obligation or liability in connection with the sale of the Product.
Any representative or agreement not contained in the warranty shall be void and of no effect.

THE FOREGOING WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING ANY WARRANTY OR MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

EC REP

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Chattanooga Group is an ISO 13485 Certified Company

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