

Direct Healthcare Group

Advancing Movement & Health®

Duo User Manual



Important:

Read carefully before use and retain for future reference.

It is the carer/user's responsibility to ensure they are fully aware of and have understood all the safety and other instructions contained in these pages before installing or using the chair.

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1. Introduction to the Duo Chair

Thank you for purchasing a Direct Healthcare Group Duo chair.

The purpose of the Duo seating system is to provide the ultimate in positioning and postural management for those who are unable to maintain their body posture and require extra support.

Designed to easily adjust the tilt-in-space positioning and elevate the legrest as well as providing a pressure management seating solution, the Duo is multi-adjustable in all its dimensions for each individual user.

1.1. Why is There a Need for this Type of Chair?

The ability of a seated person to function efficiently and perform activities depends on their ability to adopt the appropriate posture. All activity is posture dependent.

If a person cannot move or has difficulty adjusting their posture, it may be necessary to use seating to try to provide externally what is limited internally.

The Duo helps fulfil the need to maintain an individual's seated posture, yet re-orientate and redistribute pressure. This is achieved by using the tilt-in-space and back angle recline features that are key to the Duo's functionality.

2. Warranty Guidelines

2.1. Warranty and Liability

Direct Healthcare Group provides a warranty to the buyer that the goods supplied will be free from defect of workmanship, design or materials for a period of twelve (12) months from date of delivery. The Duo chair frame has a ten (10) year warranty, subject to warranty guidelines 2.3 – 2.4, excluding damage to castors, upholstery and electrical components. An annual maintenance service is recommended but not essential.

2.2. Use

- a) Each Direct Healthcare Group product is designed to a high specification for a particular type of use.
- b) It is important therefore that the correct product is purchased by the buyer. If the buyer intends to purchase goods for a non-approved use he must use his own skill and judgment.
- c) No employee or agent of Direct Healthcare Group is authorised to recommend non-approved uses, and the buyer should not rely on such recommendations.
- d) User instructions should be followed in all respects.

2.3. When the Warranty will not Apply:

- a) Use of incorrect cleaning products that may damage the surface material.
- b) Incorrect maintenance not approved by Direct Healthcare Group.
- c) Alterations by the buyer to the original goods.
- d) Incorrect means of transportation of the goods.
- e) Normal wear and tear.
- f) Non Approved uses:
 - Sitting on the arms of a chair.
 - Sitting on the legrest or footrest of a chair.
 - Hitting the chair against people and objects such as: walls, doors, beds, tables, chairs, etc.
 - Spilling food, urine, excrement and other matter on the chair and not cleaning it off within a very short time of spillage (2 minutes) often causes the chair to smell and become a health hazard. Also, matter penetrates covering material, seams and foam.
 - Excessive force is often applied to the moving parts of chairs thereby breaking or bending metal and wood parts.
 - Bumping chairs up or down stairs or over obstructions with a person seated in the chair causes damage to wheels, framework and upholstery.

2.4. When the Warranty Does Apply:

Direct Healthcare Group will:

- a) Rectify the defect
- or
- b) Where in the opinion of Direct Healthcare Group, rectification is impossible, the product will be replaced.

2.5. Statutory Rights

Nothing contained in our Terms and Conditions nor in these guidelines shall affect the statutory rights of the consumer.

2.6. Warning

In this manual, warnings are indicated by symbols. The warning symbols are accompanied by a heading that indicates the severity of the danger.



WARNING

Indicates a hazardous situation that could result in serious injury or death if it is not avoided.



CAUTION

Indicates a hazardous situation that could result in minor or slight injury if it is not avoided.



IMPORTANT

Indicates a hazardous situation that could result in damage to property if it is not avoided.

3. Clinical Applications

3.1. Intended Use

The Duo is intended for the following user environments:

- Domestic home use
- Hospital, hospice and care home environments
- For those with or at risk of developing an unconventional body shape
- For those with postural related problems

3.2. Who is the Duo Suitable for?

The Duo is appropriate for the following users

- Semi-ambulant and non-ambulant users who require assistance getting in and out of the chair.
- Users requiring advanced postural support when seated.
- Users at low to medium risk of pressure injuries (on chairs fitted with Reflexion™ seat foam).

- Users at high risk or with up to a Grade II pressure injury (on chairs fitted with an Intelli-Gel® seat) following a clinical assessment
- Users at high risk to very high risk or with up to a Grade IV pressure injury (on chairs fitted with a Dyna-Tek® Intelligent Air seat) following a clinical assessment.
- Users with mild to severe cognitive impairment.
- For users undergoing rehabilitation, therapy or treatment.
- For users needing postural support when being moved.

3.3. Who is the Duo not Suitable for?

The Duo is not suitable for the following users:

- Fully ambulant users unless fully supervised by a healthcare professional in a treatment setting and following a clinical assessment.

4. Product Information

4.1. Product Identification

Each chair has a unique number to enable swift identification.

This number can be found on the underside of the legrest of the chair.

4.2. Key Features

- Tilt-in-Space, independent back angle recline and legrest elevation controlled through either:
 - Regulated Motion technology (excluding Duo Mini)
 - Electrically powered, or
 - Manual Gas Action facility
- Two back style options:
 - Waterfall
 - Sculpted
- Three pressure relieving seat module options
- Dartex on all user contact surfaces
- Articulating legrest without compromising footboard positioning
- Tool-free, lever and spring-clip adjustments
- Split-wing headrest for support of the head and shoulders
- Adjustable headrest for precise positioning of the head
- Push handle
- Strong, durable 100mm unbraked front and braked rear castors

4.3. Key Options

4.3.1. Pressure Management

Pressure management is critical for those who are seated for long periods or for those at risk of tissue damage. The Duo has pressure relieving foams on all contact surfaces areas of the chair and further options are available for the seat module in accordance with the occupant's needs.

If you are unsure about the suitability of your pressure care, please seek advice and input from a qualified Occupational Therapist, Tissue Viability Nurse, healthcare professional and/or Direct Healthcare Group representative/retailer before purchasing.

Sales Order No.	
Date of Manufacture.....	Direct Healthcare Group Ltd, Withey Court, Western Industrial Estate, Caerphilly, UK, CF83 1BF
Client's Name.....	Tel: +44 (0)800 043 0881
Product	
Meets B.S. 5852 for cigarette and match, also crib 5 over CMHR foam. Meets 'The Furniture & Furnishing (Fire) (Safety) Amendment Regulations 1993'	

4.4. Accessories

Duo Major		Duo Minor	
Duo Major Leg Laterals	DU103	Duo Minor Leg Laterals	DU104
Duo Negative Legrest Angle	DU105	Duo Negative Legrest Angle	DU105
Lateral Supports (Pair)	DU601	Lateral Supports (Pair)	DU600
Pommel	DU602	Pommel	DU602
Duo Legrest Wedge (Specify Dimensions in Comments)	DU111	Duo Legrest Wedge (Specify Dimensions in Comments)	DU112
Duo Major Arm Covers	DU815	Duo Minor Arm Covers	DU816
Extra Waterfall Cushion (For Back Heights 910mm, 940mm, 970mm)	DU401	Extra Waterfall Cushion for Back Heights (740mm, 780mm, 810mm, 840mm, 870mm)	DU409
Footboard Cover (Replacement)	DU811	Footboard Cover (Replacement)	DU812
Flat Seat Board	DU511	Flat Seat Board	DU511
Easicare Medium 4 Point Lap-Belt with Fixings	DU701	Easicare Medium 4 Point Lap-Belt with Fixings	DU701
Easicare Medium 2 Point Lap-Belt with Fixings	DU703	Easicare Medium 2 Point Lap-Belt with Fixings	DU703
Easicare Large 2 Point Lap-Belt with Fixings	DU704	Easicare Large 2 Point Lap-Belt with Fixings	DU704
Easicare Large 4 Point Lap-Belt with Fixings	DU705	Easicare Large 4 Point Lap-Belt with Fixings	DU705
Lap-Belt (Requires D-Ring Straps)	KB724	Lap-Belt (Requires D-Ring Straps)	KB724
Large Pelvic Positioner (Requires D-Ring Straps)	KB705	Large Pelvic Positioner (Requires D-Ring Straps)	KB705
Large Padded Vinyl Pelvic Positioner (Requires D-Ring Straps)	KB726	Large Padded Vinyl Pelvic Positioner (Requires D-Ring Straps)	KB726
Large Fleecy-Faced Pelvic Positioner (Requires D-Ring Straps)	KB719	Large Fleecy-Faced Pelvic Positioner (Requires D-Ring Straps)	KB719
D-Ring Straps (Long)	UL706	D-Ring Straps (Long)	UL706
Universal Mobile Tray	KB313	Universal Mobile Tray	KB313
Annual Maintenance Visit for Duo (Per Chair)	DU990	Annual Maintenance Visit for Duo (Per Chair)	DU990

Duo Mini	
Duo Mini Leg Laterals	DU110
Duo Mini Laterals (Pair)	DU603
Duo Mini Adjustable Pommel	DU604
Duo Legrest Wedge (Specify Dimensions)	DU113
Duo Mini Arm Covers	DU817
Extra Waterfall Cushion for Back Heights 625mm, 645mm, 665mm	DU421

Duo Mini Flat Seat Board	DU552
Duo Mini Tray with Straps	DU300
Duo Mini Easicare 4-Point Lap Belt with Fixings	DU702
Lap-Belt (Requires D-Ring Straps)	KB724
D-Ring Straps	UL706



CAUTION

Only use accessories recommended by Direct Healthcare Group with the Duo chair.

5. Guidelines for Best Practice

To ensure good practice when considering purchasing an Duo chair and effective use post purchase we advise that the following guidelines are considered:

- Seek advice and input from a qualified Occupational Therapist, healthcare professional and/or Direct Healthcare Group representative/retailer at the initial prescription of the chair.
- If unsure when ordering the chair and any accessories contact either the Occupational Therapist involved, your Direct Healthcare Group representative, retailer or Direct Healthcare Group Customer Care Team on Freephone 0800 043 0881.
- All care-givers that will be supervising the user(s) should be trained in operating the chair to ensure correct positioning of the user is achieved.

6. Instructions for Use

The purpose of these user instructions is to ensure the safe operation and maintenance of your Duo chair.

The chair is ready for use once fully installed in the correct position and all carers/users have read and understood the operating instructions.

Safety warnings are included within these user instructions and it is the operator's responsibility to ensure these are read and fully understood.

If you have any questions or concerns, please contact your Direct Healthcare Group representative, retailer or the Direct Healthcare Group Customer Care Team on **Freephone 0800 043 0881**.

Please retain these instructions for future reference

6.1. General Operation

Products must **never** be modified or altered after purchase other than by Direct Healthcare Group authorised personnel.

It is extremely important that Duo chairs are used appropriately, if there is any doubt as to the suitability of the product for a user, professional advice should be sought from a qualified healthcare professional such as an Occupational Therapist, Physiotherapist, Tissue Viability Nurse or a moving and handling specialist.

Consideration should be given to matching the basic dimensions of the chair to the body size of the user to ensure good posture, support, comfort and safety. Any pressure care, moving and handling, incontinence or infection control issues should be considered and appropriate advice taken from qualified healthcare professionals.

Environmental factors should also be considered and assessed and any potential risks or hazards should be identified and taken into consideration to ensure user safety.

When any chair is specified we recommend that a risk assessment is conducted to ensure it will be safe and appropriate for the user(s) of the chair and for all who may find themselves in the vicinity of the chair. Regular reassessment as to the suitability of the product for the user is important.

If you wish to discuss safety issues in more detail please telephone our Customer Care Team on **Freephone 0800 043 0881**.



CAUTION:

When the chair is in use, always ensure the user is checked regularly for safety and is not left unattended for long periods of time.



WARNING

The Duo is not suitable for use by children. Any children present in the vicinity of the chair must be supervised at all times.



CAUTION

Do not sit on the arms of the chair at any time.



WARNING

Do not push the chair up or down steps or a steep incline as this could result in loss of control.



WARNING

Ensure there is nothing present to obstruct the free movement of the chair before attempting to use the chair.

Battery Care *(Electric and Regulated Motion Models)*

The battery is charged through the handset using the power pack included with the chair. The power pack should be plugged into a mains socket and then attached to the hand control unit. The charging port on the hand control is at the bottom of the unit.

We recommend that if the chair is used during the day, the battery should be charged overnight to ensure the battery is topped up regularly.

The chair can be used whilst the chair is being charged, however, we recommend that this is avoided where possible to ensure the charger cable does not become a tripping hazard.



IMPORTANT

Do not allow the battery to completely discharge as this will render it unable to fully recharge again. If this happens, the battery will need to be replaced.

**IMPORTANT**

Never move the chair while the charger is still plugged into the wall socket.

**WARNING**

We recommend the use of a power surge protector when using the power pack.

6.2. Setting up the Duo for use

Upon delivery of the chair the wrapping should be removed carefully in order not to damage the upholstery.

The user instructions must be fully read by all involved with using the chair and ensure the chair is set up correctly before use.

It is recommended that the chair is adjusted to accommodate each occupant's specific requirements in terms of seat length, leg length and angle, and tilt-in-space.

Begin by sitting the user in the chair, most adjustments can be easily made with the occupant in the chair with the exception of the seat length which is easier to facilitate when the chair is unoccupied.

**IMPORTANT**

Do not use sharp scissors or blades to cut the plastic wrapping from the chair as this could accidentally damage the upholstery.

Electric and Regulated Motion Models

On receipt of the chair, the battery must be fully charged for 8 hours before use.

**IMPORTANT**

Do not use sharp scissors or blades to cut the plastic wrapping from the chair as this could accidentally damage the upholstery.

6.2.1 Seat Depth Adjustment

The seat depth should be adjusted for each occupant. If the seat depth, from the front of the seat cushion to the backrest of the chair, is too deep the occupant will slide forward, losing posture and increasing localised pressure, and if it is not deep enough, pressure will be concentrated on a smaller area of the body and poorly distributed.

If the person is slumped in the chair when being measured it will give an inaccurate seat depth measurement. Correct this position before measuring provided it is safe to do so.

The chair back or the back of the seat cushion should be the starting point for measuring seat depth. To measure, squat to the person's side to avoid stooping and hold the tape measure end against the chair back or the back of the seat cushion and bring the tape forwards until it is level with the back of the knee. Record the measurement.

If the legrest is regularly used at 90° to the seat then a minimum clearance of 25mm or one inch between the front of the seat cushion and the calf is desirable when the occupant is seated against the back of the seat.

If the legrest is generally used elevated, then the optimum seat length is when the calf lightly touches the legrest cushion.

To adjust, locate at the rear of the seat module a spring-loaded adjuster. Lifting the spring will enable the seat module to be moved forwards or backwards according to the user's needs.

Check that the silver spring adjuster is securely in place and the seat module is not movable.

Position the user in the chair to ensure the seat length is correct. If it needs adjusting further ensure the chair is unoccupied and repeat the adjustment steps.

**IMPORTANT**

Only adjust the seat length when the chair is unoccupied.

6.3. Seat Height Adjustment *(Electric and Regulated Motion Models)*

The seat height of the chair can be raised or lowered according to the needs of the user.

On the right hand side of the chair is a retractable handle that facilitates the chair movement..

To **raise** the chair, turn the handle clockwise until the desired height is reached.

To **lower** the chair, turn the handle anti-clockwise.

6.4. Seat Width Adjustment

Achieving the correct seat width, the internal width of the seat between the armrests, ensures arms sit comfortably on the armrest and contributes to pelvic stability and security of the user. If too wide, it can be difficult to hold good posture, if too narrow the occupant may not be able to sit right back in the chair.

To measure the seat width, seat the occupant in the centre of the chair, measure across the widest area of the bottom/hips and add 5cm or two inches each side.

To adjust the seat width:

- Remove the side arm panel by pulling it away from the chair. It is fitted with plastic clips for easy removal and fitting.
- Locate and loosen the butterfly knob at the rear of the under arm and the spring-loaded adjuster at the front.
- Pull the spring-loaded adjuster down and pull the whole arm assembly either in or out to the required width. Keep the gap between each arm and the seat the same.
- Ensure that the spring-loaded adjuster is securely in place and re-tighten.
- Repeat on the opposite arm.
- Replace the side arm panel by locating the plastic clips on the metal frame of the chair and pressing until it fixes to the frame.

6.5. Removing the Seat Module

The seat module can be removed completely for replacement or cleaning.

To remove the seat module:

- Locate two screws at the front of the chair that should be removed completely using a Phillips screwdriver.
- The seat module can now be removed and replaced as necessary.

! **IMPORTANT**

When replacing the seat module, ensure that the screws are replaced at the front of the seat to avoid the module falling out of the seat

6.6. Arm Height Adjustment

The Duo features independent arm height adjustment to allow the user's elbow to rest comfortably on the armrest, providing support without having the shoulders raised or hunched in turn encouraging a better posture.

To adjust the arm height:

- Remove the side arm panel by pulling it away from the chair. It is fitted with plastic clips for easy removal and fitting.
- Loosen the front and back spring-loaded adjuster. Rotate anti-clockwise until loose.
- Raise or lower the arm to the required setting.
- Secure both the front and back levers.

! **IMPORTANT**

Do not take the arm above 300mm from the top of the seat module as the arm panel will not fit back into the side of the arm.

6.7. Removable Arms

The side arms of the Duo are detachable for easy side transfer and sling positioning if a hoist is used.

To remove the side arms:

- Remove the side arm panel by pulling it away from the chair. It is fitted with plastic clips for easy removal and fitting.
- Locate and loosen the butterfly knob at the rear of the under arm and the spring-loaded popper at the front.
- Pull the spring-loaded popper down and pull the whole arm assembly away from the chair.



CAUTION

To ensure user safety, never remove both arms at the same time.



CAUTION

Never sit on the arms or put under pressure at the front of the arms.

6.8. Castors

The Duo is fitted as standard with four 100mm/4" castors with two swivel castors at the front and two locking castors at the rear that will not roll or swivel when the braked are activated.

To **apply** the castor brakes on the rear castors, press down on the **red** front edge of the ridged pad on each wheel.

To **unlock** the brakes on the braked wheels, push down on the raised top of the **red** ridged pad until it is level with the rest of the wheel housing.



Braked



Unbraked



WARNING

Ensure the castor brakes are applied at all times when the occupant is left unattended in the chair.



WARNING

Ensure castor brakes are applied when the occupant is being transferred in or out of the chair to avoid any unexpected movement of the chair.



CAUTION

Ensure there is nothing present to obstruct the free movement of the chair before releasing the castor brake and attempting to move the chair.



CAUTION

Always check that the castors are unlocked before moving the chair.



WARNING

Ensure all four wheels are in contact with the floor surface before leaving the patient unattended.



WARNING

Ensure the chair is on an even ground before leaving a patient unattended.

6.8.1. Directional Lock Castors (Optional at Time of Manufacture)

The Duo chairs can be fitted with a directional lock castor. This allows one castor to be locked in the 'straight-ahead' direction to enable accurate forward steering.

The back right wheel is generally assigned as the directional locking castor identifiable by the green tab. It enables the castor to be locked in the "straight ahead" position making it easier to push the chair in a straight line.

- To activate press down on the **green** front edge of the ridged pad. Then push the chair forwards to activate the directional lock. It will "click" when in the straight ahead position.
- To deactivate the directional castor, press down on the top edge of the **green** ridged pad until it is level with the top edge of the rest of the wheel.
- Ensure the directional lock castor is deactivated before manoeuvring the chair in tight spaces.
- The remaining three castors will be fully locking castors (**red** tab) that will not roll or swivel when the brake is activated.



6.9. Tilt-in-Space

What is Tilt-in-Space?

Tilt-in-space is a pivoting system that provides a reclined, resting position enabling the occupant of the chair to be tilted forward or backwards whilst maintaining posture and pelvic stability.

By keeping the angle between the chair seat and the back at around 110°, the occupant will not slide forwards into an uncomfortable slumped position. Tilting the chair redistributes the occupant's weight over a larger contact surface area, making a simple yet effective way to combat the build-up of pressure.



CAUTION

It is recommended to use a lap belt or pelvic positioner (optional accessories) with occupants with poor postural sitting ability.



WARNING

Never leave an occupant with poor postural sitting ability in a fully upright position without supervision as they may tip or slide forward into an inappropriate position or out of the chair completely.



WARNING

Ensure the occupant's hands are clear from the back of the chair whilst the chair is being tilted, to avoid any risk of pinching within the tilt mechanism.



WARNING

Ensure there is nothing present to obstruct the free movement of the chair (e.g. children, pets or solid objects) before operating the tilt-in-space.



CAUTION

Ensure any tray used with the chair is removed before tilting the chair; otherwise contents of the tray could spill onto the user.

6.9.1. Manual Operation *(Manual Models Only)*

It is recommended that the tilt-in-space angle is changed at regular intervals to redistribute pressure and minimise the risk of the occupant developing pressure hotspots which could lead to pressure injuries.

- Locate the tilt lever on the push handle on the rear of the chair and squeeze towards the push handle to release the tilt lock.
- Apply firm downward pressure with both hands on the push handle to tilt the chair backwards, alternatively lift the push handle upwards to raise the chair to an upright position.
- At any point during the upward or downward tilt motion the lever can be released and the chair will lock in the selected position.
- It is always advisable to adjust the positioning of the legrest once the tilt-in-space positioning has been chosen, to ensure a correct and comfortable posture.

6.9.2. Electric Operation *(Electric Models Only)*

The electric and regulated motion powered Duo chairs enable either the carer or the user, where appropriate, to adjust the tilt-in-space facility by the simple touch of a button.

Simply press and hold the 'Lowering Tilt-in-Space' button to tilt the chair backwards until the desired position is reached. Release the button.

To bring the chair back up towards an upright position, press and hold the 'Raising Tilt-in-Space' button until the desired position is reached. Release the button.

It is always advisable to adjust the positioning of the legrest once the tilt-in-space positioning has been chosen, to ensure a correct and comfortable posture.

6.9.3 Regulated Motion Operation *(Regulated Motion Models Only)*

Regulated Motion has been incorporated to create the ultimate pressure management chair.

The six-buttoned hand controlled is programmed to ensure the Tilt-in-Space has “Regulated Motion”, or the ability to move over a set range, automatically adjusting the Tilt-in-Space. The pattern of movement is set to repeat to ensure motion over a period of time within a specified tilt range.

There are two time modes:

- **Auto Timed** – The Regulated Motion will operate over an 80 minute cycle
- **Auto Continuous** – The Regulated Motion will continue to operate until switched off

As a guide, the Tilt-in-Space cycle tilts the chair approximately one third of a degree every 30 seconds. Overall, it takes approximately 20 minutes to complete 15 of movement in one direction. It can be started from any position from an upright seated position to 35°.

To start the cycle: Press either the Auto-Timed Tilt-in-Space button or the Auto-Continuous Tilt-in-Space button.

To stop the cycle: Press any of the four lower buttons on the remote to take the operation back to manually operating the Tilt-in-Space via the handset.

6.10. Back Angle Recline

The angle of the back is adjustable in relation to the seat in order to ensure comfort and facilitate correct positioning.

6.10.1. Manual Operation

To alter the angle, squeeze the “brake-style” handle on the right hand side of the push handle at the back of the chair. This activates the positioning mechanism and enables the back to recline. Release the lever when the desired angle is achieved. To bring the chair back to an upright position, squeeze the “brake-style” handle on the right hand side of the push handle at the back of the chair and release to lock into place.

6.11. Articulating Legrest

The articulated legrest can assist with the lymphatic and blood circulation. Lifting and straightening the knees has the effect of allowing the blood to circulate more freely, reducing the effort required by the heart and arterial systems. Raising the legs can also help alleviate leg oedema, a build-up of fluid in the legs.



IMPORTANT

Do not sit on the legrest. The legrest is not designed to support the weight of an adult.



WARNING

When retracting the legrest, ensure the occupant’s legs are in the middle of the legrest to avoid the risk of trapping the occupant’s legs or feet between the legrest and chair frame.



WARNING

When retracting the legrest, keep hands clear of the seat cushion, to avoid any risk of pinching fingers.



WARNING

Ensure nothing is present to obstruct the free movement of the chair (e.g. children, pets or solid objects) before operating the articulating legrest.



IMPORTANT

Do not push down on the legrest without utilising the gas action lever or powered handset.



WARNING

Always ensure the legrest is fully retracted before exiting the chair.



IMPORTANT

When lowering the legrest, or returning the chair from a tilted to upright position, it is advisable to adjust the footrest to the shortest position or remove it entirely to prevent damage to the footrest or floor. If left extended, it will fall on the floor when the chair is tilted forward and could be damaged.

6.11.1. Manual Operation *(Manual Models Only)*

Locate the legrest release lever on the right hand side of the armrest.

Lift the lever and gently guide the legrest into an elevated position. Release the lever when the desired position is reached.

To retract the legrest, raise the same lever and push downwards.

Lower the legrest before returning the chair to its fully upright position to allow the user to stand up from the chair with ease.

6.11.2. Electric Operation *(Electric and Regulated Motion Models)*

To raise the legrest, simply press and hold the 'Raise Legrest' button on the handset until the desired height is reached.

To lower the legrest, simply press and hold the 'Lower Legrest' button on the handset until the desired angle is reached.

Lower the legrest before returning the chair to its fully upright position to allow the user to stand up from the chair with ease.

6.12. Negative Legrest Angle *(Optional at Time of Manufacture)*

A negative legrest angle can be achieved with the legrest to accommodate occupants with fixed contractures as well as to aid exiting the chair.

6.12.1. Manual Operation *(Manual Models Only)*

Locate the legrest release lever under the right hand armrest.

Pull the lever and gently guide the legrest into an elevated position.

To retract the legrest, pull the same lever and push downwards.

6.11.2. Electric Operation *(Electric and Regulated Motion Models)*

Press and hold the 'Lower Legrest' button on the handset until the desired negative angle is reached.

To return the legrest to a neutral position, simply press and hold the 'Legrest Elevation' button on the handset until the legrest returns to the neutral position.

6.13. Footrest

The height adjustable footrest provides added support and positioning for the feet and is provided to aid foot-drop and other similar conditions.



CAUTION

The carer should keep hands clear of the footrest hinge whilst operating the flip-up footrest to avoid risk of pinching fingers.



WARNING

Do not stand on the footboard at any time.

6.13.1. Footrest Height Adjustment

It is important to try to support the whole foot from heel to toe with the thighs evenly distributed on the seat cushion to ensure the least possible pressure directly behind the knee.

- Raise the legrest to the desired angle (refer to section 6.6)
- The complete footrest height should then be adjusted by releasing two spring-loaded "snaps" which engage in holes in the metalwork of the legrest

The "snaps" are at the sides of the footrest framework. Reach around the legrest and pull out both pins and turn them to 90° to enable the footrest to be positioned.

- Slide the footrest up or down as required and turn the snaps back through 90° allowing the snaps to click into the required hole.

Only when the snaps audibly click into place will the footrest be secure.



Locked



Unlocked

To completely remove the footrest from the chair, follow the above instructions and slide the footrest off the legrest frame.

To replace the footrest, slide the footrest back onto the legrest frame and secure the snaps as detailed above.

**WARNING**

Ensure the snaps are fully locked and the footrest is secure before leaving the occupier unattended.

**CAUTION**

The carer should keep hands clear of the footrest hinge whilst operating the flip-up footrest to avoid pinching fingers.

6.13.2. Footrest Angle Adjustment

The angle of the footrest can be adjusted to three different settings: -15° , 0° and 25° from horizontal.

To adjust the footrest angle:

- Locate the spring-loaded adjusters, situated on either side of the footrest.
- Pull out the spring-loaded adjusters located at the sides of the footrest. Adjust the footrest to select the angle required. Lock the spring-loaded adjusters to ensure the footrest remains in place.
- The footboard can also be completely folded up towards the legrest to enable exiting the chair without standing on the footboard.

**WARNING**

Ensure the snaps are fully locked and the footrest is secure before leaving the occupier unattended.

6.14. Headrest Positioning Adjustment

The top section of the headrest is designed to adjust forward and backward to facilitate precise positioning of the head to support the user.

To adjust the position of the headrest:

- Remove the two grey clips that hold the top section of the headrest in place.
- Slide the metalwork forwards until it reaches the desired position.
- Replace the two grey clips, ensuring they lock into the framework to lock the headrest in place.

**CAUTION**

The headrest must always be adjusted by a carer, never by the user of the chair whilst in the chair.

6.15. Headrest Angle Adjustment

The headrest is able to tilt backwards or forwards to support the user's head as required.

To adjust the headrest angle:

- Using the spring-loaded lever on the left hand side of the back frame, release the locking mechanism by turning the lever anti-clockwise.
- Replace the two grey clips, ensuring they lock into the framework to lock the headrest in place.

6.16. Headrest Split-Wing Adjustment

The split-wings provide lateral support to the user's head and shoulders. They can be angled in or out and should be adjusted to provide support for the user in the centre of the chair.

The articulating joints in the split-wing headrest are an integral part of the Duo.

By bending both wings on each side of the Duo, the headrest can be set in its desired position. The split-wing headrest will remove in place via a friction joint.

To tighten the wings, if they become loose:

- You will need an Allen key and a 13mm adjustable spanner (not supplied).
- Pull the wing back so that it lies flat.
- Loosen the cover to expose the friction joint.
- Tighten by using the Allen key at the top of the joint and the 13mm adjustable spanner to secure the bolt at the bottom.
- Refit the cover and adjust to suit.

6.17. Back Height Adjustment

The back height can be adjusted to suit the user as required.

To adjust the height of the back rest:

- Detach the loose cover back panel at the rear of the chair by unfastening the Velcro at the top and bottom of the cover.
- To adjust the back height, use the spring-loaded adjusters located on the metal back frame. When retracted and turned 90° the snaps will remain in the unlocked position, this will allow the back height to be adjusted. Slide the upper part of the back up or down until the height required is achieved and allow both pins to snap back into the required hole.
- Ensure both “snaps” are located correctly before use.
- If the back height is increased, always check that there is enough cushioning when the back angle is reclined. If there is not enough cushioning, an extra waterfall cushion should be fixed to the Velcro on the backboard cover.

Extra waterfall cushions can be obtained from Direct Healthcare Group. Please contact your Direct Healthcare Group representative, distributor or our Customer Service Team on **Freephone 0800 043 0881**.

7. Accessories

7.1. Lateral Support

The Duo can be fitted with two lateral supports that operate independently to provide postural support.

To attach or detach the lateral supports:

- Loosen the triangular handle and insert into the horizontal tube at the back of the Duo.
- The supports can be moved horizontally across the bar to widen or narrow the support, or vertically to suit the user. They are marked to ensure that they are positioned evenly to provide balanced support where appropriate.
- To move vertically, loosen the black spring-loaded levers on each lateral support at the rear of the chair. Rotate anti-clockwise until loose.
- Raise or lower the lateral support to the required setting and secure the levers.
- To move horizontally, loosen the triangular handle and adjust to preference. When appropriate positioning has been found tighten the triangular handles to provide stable and secure support.

7.2. Pommel

A pommel can be fitted to the Duo to provide the user with additional postural support and pelvic positioner. The pommel simply slides on and off from the front of the seat module.

To attach or detach the pommel:

- Firmly take hold of the pommel upholstery and metal work. Pull the pommel until it slides out of the seat module.
- To fix the pommel in place, take the metal bar of the pommel and align with the fixing point at the front of the seat module in the centre. Push the pommel into place.

7.3. Leg Laterals

Leg Laterals are one complete unit that slides onto the legrest assembly.

The footrest must be removed before fixing the leg laterals to the legrest assembly. (Refer to 6.13 for instruction).

To fit the Leg Laterals to the legrest frame:

- Locate the snaps on the Leg Lateral unit and pull these out. Align the unit with the legrest assembly and slide the Leg Lateral unit up the legrest to the desired position.
- Ensure the zips of the lateral pads are on the underside of the Leg Lateral unit to confirm the unit has been fitted to the correct orientation.
- Locate the snaps into the correct positioning holes and click the snaps into a firm fixing.

Re-fit the footrest and position at the required height (Refer to 6.13).

7.4. Laminated Tray with Straps

The tray rests across the two armrests of the Duo. It is fixed in position by taking the two webbing straps down either side of the chair, feeding the straps through the buckle and clamping them in place with the flip lock.

To remove the tray, lift the clamp to release the webbing strap and lift the tray away from the chair.



WARNING

The tray must be removed before attempting to exit the chair.

7.5 Lap-Belt and D-Ring Fixing

The Lap-Belt helps stabilise the pelvis and position the occupant in the back of the chair to achieve a good sitting posture and reduce the risk of tissue damage through the effects of shear which can occur if the occupant has an unstable posture.

When using a Lap-Belt a level of supervision appropriate to the occupants abilities must be applied at all times.

All Lap-Belts need to be correctly adjusted to adequately support the occupant without restricting breathing or causing discomfort.

It is essential the Lap-Belt does not fit loosely around the occupant and is not allowed to work loose over time as this will allow the pelvis to tilt backwards, encouraging the occupant to slide down and forward in the chair, particularly if in an upright position.

Ideally the D-Ring fixings for the Lap-Belt and the Lap-Belt itself will be fitted at time of manufacture however; it can be fitted retrospectively by a trained representative (refer to D-Ring fixing).

To use the Lap-Belt effectively, undo the buckle joining the two halves of the strap by depressing the button on the central console and place the straps over the arms or to the side of the seat before transferring the occupant into the chair.

When the occupant is seated correctly, bring the two sides of the buckle together and fasten.

To adjust the Lap-Belt, pull on the plastic loop to give firm control but take care not to restrict the occupant's movement. The Lap-Belt is designed to pull back over the hips at an angle between 45° and 60°.

This angle helps to maintain a vertical pelvis by simultaneously positioning the hip joint down and back.

D-Ring Fixing

The chair may come pre-fitted with D-Ring straps if ordered at the time of manufacture.

If so, these will normally be visible near the interface between the seat module and the back cushion.

In this case, the Lap-Belt can be fixed to the D-Rings by simply snapping the spring clip on the end of the Lap-Belt onto the visible D-Ring.

If the chair is not already fitted with D-Rings, these should be attached to a rigid part of the chair's metal framework on either side of the seat module so that they can be fed between the seat and arm modules.



WARNING

If the Lap-Belt is too loose there is a risk of the occupant sliding underneath or into an inappropriate position. The Lap-Belt should be checked for correct tightness, regularly. Care should be taken not to over tighten the Lap-Belt in order to reduce the risk of harm to the occupant.



WARNING

The webbing and plastic fittings should be checked at least weekly for any signs of damage. If damaged, the Lap-Belt should not be used.



WARNING

The occupant is at risk if the Lap-Belt is not properly specified and adjusted to their particular requirements.



WARNING

Thrusts, spasms and strong movements, as well as the partial loosening of the Lap-Belt, could cause injury to the occupant.



7.6. Pelvic Positioner

The Pelvic Positioner is used to help position occupants securely in the back of the chair for those with low muscle tone or control in their pelvis.



Fitting the Pelvic Positioner to the chair

Ensure the chair is unoccupied before fitting the Pelvic Positioner.



Place the Pelvic Positioner in the seat of the chair with the buckles pointing towards the chair front and the clips on the buckles facing down.



Feed the lengths of the straps through the D-rings on either side of the seat module.



Place the ends of the straps over the arms of the chair ready for the occupant to transfer to the chair.

Sit the occupant into the chair with their pelvis firmly back in the seat and their buttocks on the back edge of the Pelvic Positioner.



Bring the straps over the occupant's thigh and through the buckles on each end of the Pelvic Positioner, located between the occupant's legs.



Pull the straps tight and fasten down the clips on the buckles. The fit should be snug – not too tight and not too loose.



CAUTION

Take care when adjusting positions to avoid trapping or pinching of body parts.



WARNING

Only a trained individual or a responsible person should adjust the product.



WARNING

The occupant should be regularly checked and the Pelvic Positioner adjusted to ensure optimum positioning and safety.



WARNING

Due to the risk of cross infection, this product should not be used by more than one person.

8. Re-Use and Re-Issue

While the Duo chair has been tailored specifically for the planned occupant's needs at the time of manufacture, with some alterations and adjustments, the chair can be re-issued and re-used in a multi-user healthcare environment.

Please seek advice from a qualified Occupational Therapist, healthcare professional and/or Direct Healthcare Group representative/retailer before using the Duo chair with another user for whom the chair was not originally specified.



WARNING

Consideration to cross infection risks must be given when reusing or reissuing chairs.



CAUTION

If using the Duo chair in a multi-user environment conducting an in situ risk assessment is recommended.

8.1. Modularity

The Duo chair has a durable frame with modular back, arm, seat and legrest components. These components can be purchased separately as required, whether to replace a worn module or to re-issue to another user.

Contact the Direct Healthcare Group Customer Care Team on **Freephone 0800 043 0881** or your local retailer for current pricing and availability.

8.1.1. Seat Modules

The seat module dimensions are set at the time of manufacture. The Duo seat modules are available in the following seat widths:

Major – 350mm, 400mm, 450mm and 500mm

Minor – 300mm, 350mm, 400mm and 450mm

Mini – 200mm, 250mm, 300mm and 350mm

The seat modules are also available with three levels of pressure relief:

- Reflexion™ foam seat cushion (for those at low to medium risk of pressure injuries).
- Intelli-Gel® seat cushion (for those at high risk or with up to a Grade II pressure injury).
- Dyna-Tek® Intelligent Air seat cushion (for those at very high risk or up to a grade IV pressure injury). (Not available in the Duo Mini).

If an alternative size of seat module is required from the original specification, please contact Direct Healthcare Group Customer Care Team on **Freephone 0800 043 0881** or your local retailer as this will affect the back, arm and legrest modules of the chair.

A visit from a Direct Healthcare Group trained engineer will be required to fit the replacement seat module.

8.1.2. Back Modules

A replacement back module can be purchased for the Duo chair, please contact the Direct Healthcare Group Customer Care Team on **Freephone 0800 043 0881** for further information or your local retailer.

A visit from a Direct Healthcare Group trained engineer will be required to fit the replacement back module.

8.1.3. Arm Modules

Replacement arm modules can be purchased for the Duo chair, please contact Direct Healthcare Group Customer Care Team on **Freephone 0800 043 0881** or your local retailer for further information.

8.1.4. Legrest Modules

A replacement legrest cushion can be purchased for the Duo chair. Please contact Direct Healthcare Group Customer Care Team on **Freephone 0800 043 0881** or your local retailer for further information.

8.2. Disposal of the chair

The Duo chair consists of mostly metal, plastic, wood, foam and fabric components. Disposal of each individual material must be carried out in line with the environmental and disposal regulations in the relevant country, and may only take place after the chair has been dismantled fully.



9. Care and Maintenance

Every time the chair is used, check for signs of damage or excessive wear and tear.

If the chair displays signs of excessive wear and tear take out of service immediately and contact Direct Healthcare Group Customer Care Team on Freephone 0800 043 0881, or your local retailer, for advice about repair and refurbishment.



WARNING

Failure to repair damage or wear and tear could put the occupant at risk of injury.

9.1. Service Life

The service life of the chair in normal daily use is 10 years. The framework, excluding castors and consumables, is warranted for 10 years. Upholstery and other consumables which are warranted for 12 months, such as castors, upholstery and electrical components, may need to be replaced within this time frame.

It is recommended that the chair is inspected by a trained service technician every year, to ensure safe operation of the product (refer to 2. Warranty Guidelines).



WARNING

If the chair develops a fault, STOP using the chair, and contact Direct Healthcare Group Customer Care Team on Freephone 0800 043 0881 or your local retailer for further advice.

9.2. Periodic Checks

The chair should be checked every time it is used for signs of damage or excessive wear and tear to ensure safe and reliable operation.

Monthly checks should include, but are not limited to:

- Any damage to the cables or adjustment levers.
- Any loose or detached parts.
- Check castors for damage and a build-up of fluff and dirt particles.
- Any damage to the fabric of the chair including any soiling of the fabrics.

If any damage is present, STOP using the chair, and contact Direct Healthcare Group Customer Care Team on Freephone 0800 043 0881 or your local retailer for further advice on repair and refurbishment.

9.3. Cleaning

The chair should be kept clean to preserve the life and appearance of the chair.

Regular cleaning is essential to minimise risk of cross infection between users and carers particularly in a multi-user healthcare environment.



WARNING

Check the chair for correct functioning after cleaning.



WARNING

Regular cleaning is essential to minimise the risk of infection transmission between users and carers.



IMPORTANT

To reduce the risk of infection transmission to the carer, always use protective gloves when decontaminating and cleaning the chair.

9.3.1. Frame Cleaning

The metal framework of the chair can be cleaned with a mild detergent and a soft cloth.



IMPORTANT

Cleaning with scouring pads is not recommended.

9.3.2. Upholstery Cleaning



IMPORTANT

To reduce the risk of infection transmission to the carer, always use protective gloves when decontaminating and cleaning the chair.

Cadet, Venture, Berkshire and Brookland Vinyl Cleaning Instructions (External surfaces)

These vinyls have high scratch resistance and a colour solid to the base cloth.

Anti-Microbial and Anti-Fungal Protection. Tested to AATCC147.

- Clean and care for the fabric on a regular basis and it will maintain its condition and appearance. Most stains can be removed by wiping clean.
- The new generation of microfibre cleaning cloths are extremely effective with or without soap for general care and maintenance.
- Wipe clean regularly with a damp cloth to remove dust particles and light soiling.
- Remove spillages promptly (within 15 minutes) with an absorbent dry cloth.
- For heavier soiling, use a soft brush with care to avoid abrasive damage to surface and tepid soapy water (non-alkaline). Rinse clean with clear water. Dry with an absorbent cloth.
- Bodily fluids should be removed promptly (within 15 minutes) with cold water and then cleaned as above.
- Extreme soiling/infection control use a 5% sodium hypochlorite (bleach) solution.
- Do not machine wash or dry clean.
- Do not use polish or solvents.

Enduratex[®] Vinyl Cleaning Instructions (External Surfaces)

Enduratex[®] contact materials are protected by Produratec-C[®] lacquer coating and are resistant to every day wear and contact with mild acids, alkali, drinks, household stains.

- Use warm soapy water and/or Haz-tab or Clor-clean solution and a household cloth.
- Rub evenly in the direction of the grain of the material.
- Rinse with clean water afterwards.
- Can also be steam cleaned.

DO NOT USE bleaches, solvents, abrasives, wax polishes or aerosol sprays.

Dartex Cleaning Instructions (User Contact Surfaces)

General Guidance

- Attention must be paid to the properties of any other materials, which may be combined with Dartex Coatings fabrics in the final article (e.g. dimensional stability, colour fastness, washing instructions).
- Some surface wrinkling may result from cleaning procedures. This has no adverse effect on the fabric's properties.
- Abrasive cleaning agents should not be used.

Washing and Disinfection

- Superficial dirt on the coating may be removed by wiping with a soft cloth moistened with water containing a neutral detergent. More persistent contamination may be treated by wiping with alcohols or turpentine substitute, followed by hot water and detergent.
- Cleaning and disinfection in situ may be carried out on the coating with hand hot water and a neutral detergent or with a sodium hypochlorite solution (0.1% or 1000 parts per million available chlorine).
- Proprietary disinfectants may be used provided manufacturer's instructions are followed.
- All cleaning agents, and disinfectants, must be thoroughly rinsed off and the item dried before storage. Failure to do this may result in the accumulation of reagent that could damage the polyurethane coating, react with the chair frame, or negate the biocompatibility results of the Dartex fabric.

Drying

- It is essential that articles be thoroughly dried after all cleaning procedures and before storage.

Storage

- Store in a cool, dry area. Avoid excessive pressure and contact with non-colourfast materials.

10. Technical Data

10.1. Manufacturing Address

Direct Healthcare Group
Withey Court, Western Industrial Estate, Caerphilly, UK, CF83 1BF

Telephone: +44 (0) 800 043 0881

Email: info@directhealthcaregroup.com

10.2. Maximum User Weight

Maximum user weight limit: **Duo Major/Minor 160kg/25 stone Duo Mini 57kg/9 stone.**

Please adhere to the user weight limit for the Duo chair and note your warranty will be void and user safety may be compromised should the weight limit be exceeded.

10.3. Weight and Dimensions of the Chair

Item	Weight (kg)	Dimensions (mm)
Duo Major Electric	80kg	1180 x 680–830 x 1180–1570
Duo Minor Electric	71kg	1030 x 620–770 x 1110–1440
Duo Mini Electric	68kg	880 x 570–640 x 920–1190
Cardboard Box	7kg	1000 x 800 x 1300
Pallet	10kg	1000 x 800 x 150

10.4. Product Standards

MHRA Registration CA000105

10.4.1. Flammability Testing

- BS 7176:2007+A1:2011 (Specification for resistance to ignition of upholstered furniture for non-domestic seating by testing composites).
- BS EN 1021-1:2014 (Furniture. Assessment of the ignitability of upholstered furniture. Ignition source smouldering cigarette).
- BS EN 1021-2:2014 (Furniture. Assessment of the ignitability of upholstered furniture. Ignition source match flame equivalent).
- BS 5852:2006 (Methods of test for assessment of the ignitability of upholstered seating by smouldering and flaming ignition sources).

10.4.2. Strength, Stability, Durability, Risk and Safety

- BS EN 1022:2005 (Domestic furniture. Seating. Determination of stability).
- BS EN 16139:2013 (Furniture. Strength, durability and safety. Requirements for non-domestic seating).
- BS EN ISO 14971:2012 (Medical devices. Application of risk management to medical devices).

10.4.3. Quality and Environmental



11. Customer Support

Should you have any concerns or are experiencing any problems regarding the set up or maintenance of your Duo chair please contact our Customer Care Team on Freephone 0800 043 0881.



Intelligent Pressure Care
Specialist Seating
Rental & Service Solutions

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