



# Quartet™ Mattress System User Manual

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# Table of Contents

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1.0	INTRODUCTION	4
1.1	Indications for Use	4
2.0	SAFETY AND LIABILITY INFORMATION	5
2.1	Warnings	5
2.2	Safety Instructions	6
2.3	Bed Rail Entrapment Risk Notification	7
2.4	Liability of Agiliti	8
3.0	PRODUCT SPECIFICATIONS AND FEATURES	9
3.1	Technical Specifications	9
3.2	Safety Agency Approval Specifications	11
3.3	Symbols	12
3.4	Product Overview	15
3.4.1	Quartet Options (Display Labels on Control Unit)	15
3.4.2	Control Unit	15
3.4.3	Mattress	16
3.5	Quick Reference Guide – Quartet Auto Immersion	17
3.6	Quick Reference Guide – Quartet Clear Turn	18
3.7	Quick Reference Guide – Quartet Turn Assist	19
4.0	SYSTEM SET-UP	20
4.1	Unpacking the System	20
4.2	System Set-Up	20
4.3	Replacement Mattress System	21
5.0	OPERATING INSTRUCTIONS	22
5.1	Additional Operating Instructions – Clear Turn Mattresses	28
5.2	Additional Operating Instructions – Turn Assist Mattress	29
5.3	Additional Operating Instructions – Clear Turn and Turn Assist Mattresses	30
6.0	CLEANING PROCEDURES	31
6.1	Cleaning the Control Unit	31
6.2	Cleaning the Mattress	32
7.0	CARE AND STORAGE	33
7.1	Preventative Maintenance	33
8.0	TROUBLESHOOTING GUIDE	34
9.0	WARRANTY	35
	PREVENTATIVE MAINTENANCE AND REPAIR LOG	36
	ORDERING INFORMATION	37

# Quartet™ Mattress System



## 1.0 INTRODUCTION

The OnCare® Quartet™ solves the challenge of preventing and managing high-acuity, complex wounds in one easy-to-use, comprehensive package. Engineered with intelligent auto immersion software that continuously monitors and adjusts to a patient's changing positions, the Quartet also offers true low air-loss, pulsation and your choice of alternating pressure, turn assist or continuous lateral rotation therapies. These therapies not only accelerate the recovery process, but reduce the burden on clinicians to continuously monitor patient movements and mattress settings, allowing for more time to spend on bedside care.

### 1.1 Indications for Use

The OnCare Quartet Mattress System is intended to be used for the following clinical indications:

- Prevention and treatment of pressure injuries (including Stage 1 – 4)
- Acute surgical wounds
- Flaps and grafts
- Burns
- Excessive maceration

**CAUTION:**

- **ALWAYS CONSULT THE PATIENT'S PHYSICIAN BEFORE USING THE QUARTET MATTRESS SYSTEM.**
- **READ ALL INSTRUCTIONS BEFORE USING THIS PRODUCT. DO NOT DISCARD.**

## 2.0 SAFETY AND LIABILITY INFORMATION

### 2.1 Warnings

Warning terms are used in this manual and signify hazards and unsafe practices which could result in personal injury or property damage. See the definitions below for information relating to each term.



**NOTE:** Indicates an imminently hazardous situation that could result in damage to property if it is not avoided.



**CAUTION:** Indicates a potentially hazardous situation which, if not avoided, may result in property damage and/or minor or serious injury or death.



**RISK OF ELECTRICAL SHOCK:** Do not remove control unit cover.



**EXPLOSION HAZARD:** Do not use the control unit in the presence of flammable anesthetics or in the proximity of an oxygen tent.

There is no known risk of adverse effects on the OnCare control unit/pump caused by other electromagnetic devices, present at the time of treatment, or vice-versa.

- Refer servicing to qualified service personnel.
- Never drop or insert objects into any opening of the control unit.
- DO NOT SMOKE while using this product and do not use in the presence of smoking materials or open flame. Smoking by visitors in the room will contaminate the system. Therefore, visitor smoking is NOT permitted. Air flowing through air mattress will support combustion. Failure to observe this warning can result in severe fire, property damage and cause injury or death.
- Entrapment may occur. Patient entrapment with bed side rails and mattress may cause injury or death. Mattress MUST fit bed frame and side rails snugly to prevent patient entrapment. Follow the manufacturer's instructions and monitor patient frequently. Proper patient assessment and monitoring, and proper maintenance and use of equipment is required to reduce the risk of entrapment. Variations in bed rail dimensions, and mattress thickness, size, or density could increase the risk of entrapment. Visit the FDA website at <http://www.fda.gov> to learn about the risks of entrapment. Refer to the owner's manual for beds frames and rails for additional product and safety information. Mattress MUST fit bed frame and bed rails snugly to reduce the risk of entrapment.
- To avoid risk of electric shock, this equipment must only be connected to a supply main with a protective earth using the supplied 14-foot (427cm) hospital-grade power cord provided with the product.
- Do not heat, steam autoclave, immerse the control unit in liquids or spill liquids or food on or into the control unit. In the event of any spillage, immediately turn off the control unit and disconnect it from the power source. Return the control unit to Agiliti for servicing.
- Care should be taken such that the power cord of the control unit is not pinched and does not have any objects placed upon it. Make certain the unit and power cord is not located where it can be stepped on or tripped over.
- Do not modify this equipment without authorization from the manufacturer.
- Not for use in oxygen-rich environments.

- Before opening or cleaning the control unit enclosure, make certain that the unit is turned off and unplugged from its power source. While the unit is turned off, press the two   ARROW buttons until the screen turns on and states "Disconnecting Battery from System" and then turns back off. The control unit enclosure should only be opened by authorized technical service personnel.
- Please read this manual before operating any Quartet Mattress. If you are unable to understand the manual, please contact your Agiliti representative or the manufacturer before attempting to use this equipment, otherwise personal injury or property damage may result.
- When installing the Quartet mattress system, do not exceed the manufacturers rated weight of the mattress or the bed frame. See the bed frame manufacturer's manual for bed frame weight rating.

## 2.2 Safety Instructions



**CAUTION:** Before operating your Quartet control unit, be certain the AC power available at your location matches the power requirements in Section 3.1 of this manual.

- Do not spill liquids or food on or into the control unit. In the event of any spillage, immediately turn off the control unit and disconnect it from the power source. Return the control unit for servicing by contacting your Agiliti representative.
- Care should be taken such that the controls on the footboard of the bed frames are not obstructed by the Quartet control unit.
- Care should be taken such that the control unit air vents are not blocked and kept away from any heat sources or radiators during the operation of the unit.
- Do not attempt to service the control unit except as explained in this operating instruction manual. Contact Agiliti for servicing instructions. Always follow operating and service instructions closely.
- Do not place the patient directly on the mattress without the top sheet.
- Do not attach any non-Quartet accessories or products to Quartet products unless authorized by Agiliti.
- If the battery does not charge and/or does not function, contact Agiliti or manufacturer for repair.



**RISK OF ELECTRICAL SHOCK:** Before opening the control unit enclosure, make sure the control unit is turned off and unplugged from its power source. The control unit enclosure should only be opened by an Agiliti authorized qualified service technician.

- To avoid electric shock, always plug the power cord of the control unit into a properly grounded power source.
- Do not insert items into any openings of the control unit. Doing so may cause fire or electrical shock by shorting internal components.

## 2.3 Bed Rail Entrapment Risk Notification

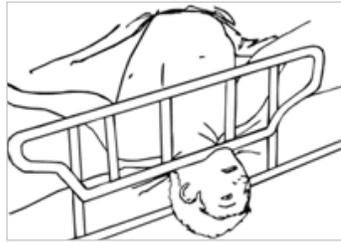


**CAUTION:** NOTICE TO PATIENT, PATIENT'S FAMILY AND/OR PRIMARY DAY-TO-DAY CAREGIVER:

DO NOT use this product without first completely reading and understanding this Bed Rail Entrapment Risk Notification and any additional instructional material such as user's manual, instruction sheets and on-product warnings supplied with the bed frame being utilized. If you are unable to fully understand this Bed Rail Entrapment Risk Notification, the on-product warnings or any additional instructional materials, contact the patient's health care provider and/or your bed frame equipment provider before using this equipment. Failure to understand and comply with the information contained in this Bed Rail Entrapment Risk Notification can result in serious injury or death.



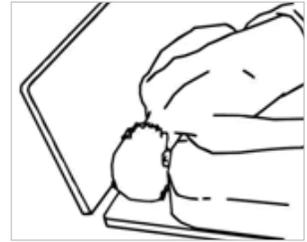
Entrapment within the bed rail



Entrapment under the bed rail



Entrapment between the bed rail and mattress



Entrapment between the head or foot board and the end of the mattress



Entrapment under the bed rail and at the ends of the bed rail



Entrapment between split bed rails



Entrapment between the end of the rail and the side edge of the head or foot board

### **Bed Rail Entrapment is a known risk in the use of bed frames equipped with bed rails.**

Every patient is unique. Only the patient's health care provider is familiar with the patient's unique medical condition and needs. Only the patient's health care provider from whom you obtained this equipment, upon proper assessment of the patient's medical condition and needs, can evaluate whether this equipment is appropriate for use by any particular patient and assist the patient, the patient's family and/or the patient's primary day-to-day caregiver in assessing the Risk of Entrapment.

Proper patient assessment, equipment selection, frequent patient monitoring, and compliance with instructions, warnings and this Bed Rail Entrapment Risk Notification is essential to reduce the risk of entrapment.

Accessories have been developed in the industry to reduce the openings in existing bed systems that could cause entrapment. Any modification through the use of accessories must be used in conjunction with proper patient assessment prior to intervention. For a full discussion on this topic, see the Hospital Bed Safety Workgroup's "A Guide for Modifying Bed Systems and Using Accessories to Reduce Risk of Entrapment" found at <http://www.fda.gov>.

Conditions such as restlessness, mental deterioration and dementia or seizure disorders (uncontrolled body movement), sleeping problems, and incontinence can significantly impact a patient's risk of entrapment, Pediatric patients or patients with small body size may also have an increased risk of entrapment.

- Bed rails are intended to prevent an individual from inadvertently rolling out of bed, provide assistance to a patient when repositioning and to provide a sense of security. NEVER use bed rails for restraint purposes where "restraint" means preventing or hindering the patient within the bed from exiting the bed as they wish. Use of rails as a means of restraint significantly increases a patient's risk of entrapment.
- Bed rails are intended to be used as a pair in a bed system. When in use, both side rails must be in the up position, except when the patient is entering or exiting the bed. Use with one side rail up and one side rail down could create an increased risk of entrapment.
- Bed rails and/or their mountings should not be used if they are bent or otherwise deformed. Bent or deformed bed rails and/or bed rail mountings increase gaps and increase the risk of entrapment. DO NOT place pressure upon bed rails while moving the bed. Although bed rails are not rated to any specific patient weight limitation, the bed rails or their mountings may become deformed or broken if excessive side pressure is exerted on the bed rails.
- Mattress overlays or active therapeutic support surfaces (TSS), which support the patient on an air mattress or specialized foam layer, may present an increased risk of entrapment for some patients. The benefit of TSS product use must be weighed against the potential increased risk of entrapment. The risk judgment must be performed by a medical professional.

The U.S. Food and Drug Administration in partnership with the U.S. Department of Veterans Affairs, Health Canada's Medical Devices Bureau and representatives from national health care organizations and provider groups, patient advocacy groups, and medical bed and equipment manufacturers including the Hospital Bed Safety Workgroup, a collection of experts from the United States FDA, health care professionals and manufacturers of hospital beds, published guidelines regarding body part dimensions as they relate to a bed system's safety. These guidelines, "Hospital Bed System Dimension and Assessment Guidance to Reduce Entrapment" contain additional information on the risk of entrapment. Visit the FDA website at <http://www.fda.gov> and search for "bed rail entrapment" to learn about the risk of entrapment or to view the FDA guidelines document.

The above statements are not intended to be a complete or comprehensive list of all risks of entrapment. Agiliti recommends that whenever bed products are used that the patient, the patient's family and/or the patient's primary day-to-day caregiver discuss entrapment risks with the patient's medical care provider.

## 2.4 Liability of Agiliti

The original warranty from Agiliti on all Quartet systems will remain in effect during the warranty period, provided any changes, readjustments, or repairs have been carried out by a factory authorized service center or a technician of Agiliti, and when the control unit and mattress system has been used according to the following operating instructions.

The liability of Agiliti under the warranty is the repair or replacement provided and, in no event, shall the liability of Agiliti exceed the purchase price paid by the customer for the product. Under no circumstances shall Agiliti be liable for any loss, direct, indirect, incidental, or special damages arising out of or in connection with the use of this product.

## 3.0 PRODUCT SPECIFICATIONS AND FEATURES

### 3.1 Technical Specifications

ELECTRICAL SPECIFICATIONS	U.S. / INTERNATIONAL
Input Voltage AC:	90 ~ 264 VAC
Input Frequency:	47 ~ 63 Hz
Maximum Power Consumption:	180 W ± 30 W
Circuit Protection:	Dual fused, 250V, 5A Fast blow fuse(s), Standard fuses
Fuse Type:	Bussmann S500-5-R
Breaking Capacity (BRK.CAP.):	@125 VAC is 10kA, @250 VAC is 200A
Mode of Operation:	Continuous

NOTE: The control unit Power Inlet is used as the means of isolating the equipment from the supply mains on all poles simultaneously.

#### PERFORMANCE SPECIFICATIONS

Weight Capacity	
Mattress Overlay*:	500 lbs. (227 Kg.) maximum
Standard Replacement Mattress:	500 lbs. (227 Kg.) maximum
Bariatric Replacement Mattress:	1000 lbs. (455 Kg.) maximum
Raised Side Bolstered Mattress*:	500 lbs. (227 Kg.) maximum
Bariatric Raised Side Bolstered Mattress*:	1000 lbs. (455 Kg.) maximum
Universal Mattress (UM):	500 lbs. (227 Kg.) maximum
Expandable Mattress (XM):	1000 lbs. (455 Kg.) maximum

Pressure Zones – Auto Immersion:	5
Pressure Zones – Clear Turn and Turn Assist*:	2
A/P Zones:	2
Rotation Zones*:	2
Max Flow:	1275 LPM (45 CFM)
Support Surface Inflation Time:	Within 60 seconds

Patient Comfort Pressures / Alternating Pressure	
Soft Pressure:	6 ± 5 mmHg
Firm Pressure – Auto Immersion:	32 ± 5 mmHg
Firm Pressure – Clear Turn and Turn Assist*:	31 ± 5 mmHg & 32 ± 5 mmHg
A/P Time:	1 minute - 99 minutes
A/P Low Pressure:	10% - 75%
Rotation Time*:	5 Minute – 2 Hours & 1 Minute – 4 Hours
Rotation Angle*:	5°- 25° & 5°- 45°

#### Patient Contact

Control unit and mattress are lead free, mercury free and latex free.

\*Applies to Clear Turn and Turn Assist models only.

## 3.1 Technical Specifications

### MECHANICAL SPECIFICATIONS

#### Control Unit

Dimensions (L x W x H):	16" x 7.25" x 12" (40.64 cm x 18.42 cm x 30.48 cm)
Weight:	15 lbs. (6.8 Kg.)
Power Cord:	14" long hospital grade
Connection – Auto Immersion and Turn Assist:	1/2" flow magnetic quick connector
Connection – Clear Turn:	1/2" flow magnetic quick connector and 2 quick release connectors
Packaging:	1 piece per box
Air Filters (2):	Charcoal Air Filters

NOTE: Clean air filters every 3 months or whenever dirty.

#### Support Surface (standard, bariatric and bolstered)

Weight:	18 lbs. (8 Kg.)
Available Mattress Lengths:	74", 78", 80", 84", 86", 88"
Available Mattress Widths:	36", 39", 42", 48"
Available Mattress Heights:	6", 9" and 10"
Packaging:	1 per box

Optional mattress with Kevlar lined fire barrier top sheet and mattress base are also available.

### ENVIRONMENTAL SPECIFICATIONS

#### Operating Conditions

Ambient Temperature:	
Relative Humidity:	40° ~ 104° F (10° ~ 40° C)
Atmospheric Pressure:	30% ~ 75% non-condensing 700 hPa to 1060 hPa

#### Storage and Shipping Conditions

Ambient Temperature:	
Relative Humidity:	-40° ~ 158° F (-40° ~ 70° C)
Atmospheric Pressure:	10% ~ 100% 500 hPa to 1060 hPa

#### Protection Against Harmful Ingress of Liquids

Ordinary Protection (IPXO)

#### Mattress Sanitation

All components such as manifold, hose assembly, air cushions, top sheet, and air pad can be easily cleaned or detached for laundry. Care should be taken if removing the cover for cleaning.

#### Disposal Requirements

This equipment should be disposed of at your local Recycling Center (Non-hazardous waste) when it has reached the end of its service life.

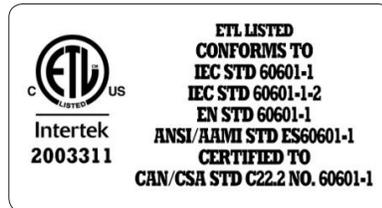
## 3.2 Safety Agency Approval Specifications

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### THE STANDARD FOR SAFETY OF MEDICAL ELECTRICAL EQUIPMENT

Class: ..... Class 1 equipment (Europe); class 2 equipment (USA)

#### ETL LISTED 3<sup>RD</sup> EDITION



#### Flame Resistance

- Unit components meet UL 94V-0)
- Mattress components pass California 117
  - Optional California TB 106, TB 129, 16 CFR 1632, 16 CFR 1633, BS 6607 (CRIB 5), BS 597-1, and BS-597-2 compliant mattresses lined with Kevlar fire barrier available (Kevlar lining based on flammability standard)

#### Registration – KAP Medical

- FDA registered company as a manufacturer and as a contract manufacturer. KAP Medical's quality system meets the requirements of: FDA 21 CFR, PART 820- QSR-Current Good Manufacturing Practices (CGMP) for medical devices
- Products are FDA listed
- ISO 13485 certified company
- Medicare coded (SADMERC)
- Health Canada Medical Device Licensed

#### Certificate of Origin

All products are manufactured in Corona, CA, USA. MADE IN THE USA

### 3.3 Symbols

NOTE: Not all features are included with each model.

FUNCTION	SYMBOL	DEFINITION
POWER		Turns unit on / off. Green = ON, Amber = STANDBY
SOFTER / FIRMER		UP or DOWN ARROW buttons adjust patient comfort pressure levels
ADJUST SETTINGS		Adjust UP or DOWN ARROW buttons to set various therapy times and patient settings
LOCK		Locks out all control unit functions to prevent tampering (MAX INFLATE is still available)
ALARM SILENCE		ALARM SILENCE mutes audible alarm
MAX INFLATE		Inflates mattress rapidly (15 minute timer) – continuous low air-loss during max inflate
SELECT		Select between therapy modes
AUTO IMMERSION		Automatically immerses patient to his or her optimal comfort level regardless of weight and position
ALTERNATING PRESSURE		Selects A/P mode – continuous low air-loss during A/P mode
BATTERY		When battery is in use, this symbol will appear on the display

### 3.3 Symbols

NOTE: Not all features are included with each model.

FUNCTION	SYMBOL	DEFINITION
POWER FAIL		In the event of power failure or if the hose is disconnected, an audio/visual alarm will sound
LOW PRESSURE		
PAUSE*		Pauses rotation/turn assist therapy cycle
LATERAL ROTATION**		Selects rotation mode
TURN ASSIST***		Selects side of turn assist therapy (patient's side)
Length Expansion Regulator		For use in extending the length of an expandable mattress
Width Expansion Regulator		For use in extending the width of an expandable mattress
Universal Mattress Regulator		For use in regulating air bladder used with recessed bed frames
Heel Zone Regulator****		For use in adjusting the level of pressure in the heel zone

\* Only available on Quartet Clear Turn Mattress System and Quartet Turn Assist Mattress System

\*\* Only available on Quartet Clear Turn Mattress System

\*\*\* Only available on Quartet Turn Assist Mattress System

\*\*\*\* Not available on Quartet Clear Turn Mattress System or Quartet Turn Assist Mattress System

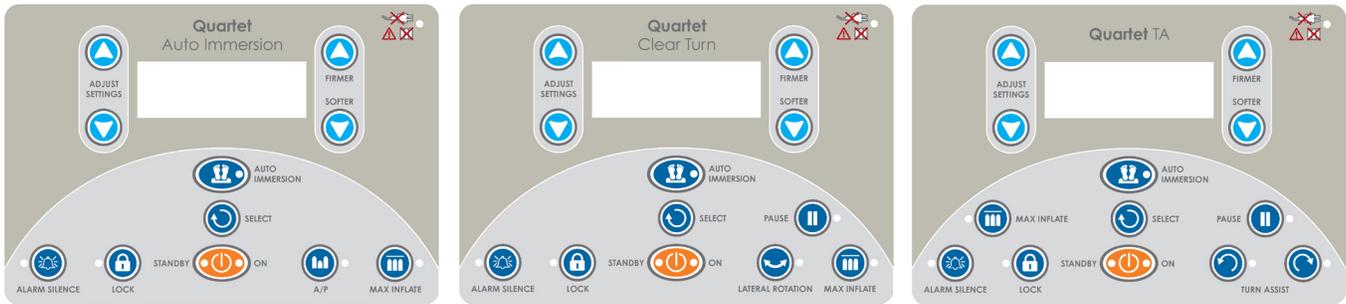
### 3.3 Symbols

NOTE: Not all features are included with each model.

SYMBOL	DEFINITION
	Indicates the point of attachment of the equipment to earth (Grounding Point)
	Attention: Instructs end user / clinician / operator to refer to the manual
	Indicates that the degree of protection against electrical shock is TYPE BF
	Not for use in presence of flammable anesthetics
	Consult instructions for use
	Waste electrical and electronic equipment (recycle)
	Risk of electrical shock – do not remove back cover
	No sharp objects
	Low heat setting
	Do not dry clean
	Do not bleach
	No open flames
	Normal cycle
	Do not iron
	Latex-free
<b>SN</b>	Mattress/control unit serial number
	Date of Manufacture
	Manufacturer

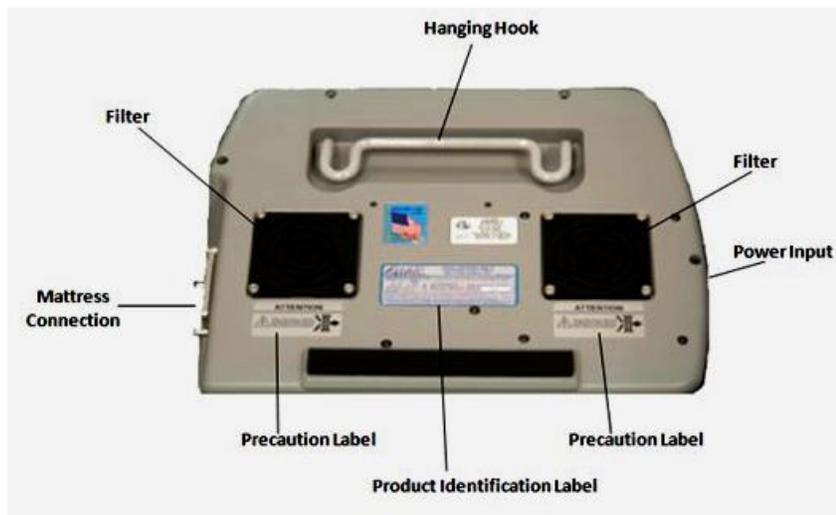
## 3.4 Product Overview

### 3.4.1 Quartet Options (Display Labels on Control Unit)



### 3.4.2 Control Unit

This system is designed to provide continuous air therapy support at required patient comfort levels and is used to inflate a replacement mattress system. The Thermoplastic 94V-0 fire retardant enclosure houses a blower, main PCB, display panel, a short circuit /over voltage protection with dual fuses, a quick connection and disconnection (CPR deflation) coupling connector (see page 25) with ½" flow ports with RTPM (real time pressure monitoring) technology sensors, and a 14' (427 cm) long detachable 16 AWG hospital grade power cord.



**NOTE: CLEAN THE AIR FILTERS EVERY 3 MONTHS OR WHENEVER DIRTY.**

Remove 4 or 8 thumb screws and separate filter foam from filter cover. Wash filter foam using soap and warm water. Wait until filter and cover are dry or replace filter before reattaching filter and cover.

### 3.4.3 Mattress

Self-contained mattress replacement system with easily detachable components for cleaning. Flame retardant, water repellant, mildew resistant, low friction and low shear, detachable lateral tubular air cushions (20-24). Air cushions are high frequency heat sealed, liquid proof and washable. Detachable zippered or strapped highly breathable, reusable, quilted Top Sheet composed of two layers; Top layer is made out of urethane coated

70 Denier nylon (4-way stretch, optional). Bottom layer is made out of quilted material. It is flame retardant, water repellant, vapor permeable, anti-microbial, low friction and low shear. 2" safety air pad to support the patient in the event of loss of air pressure in the mattress. The mattress has a hose assembly with easy to use quick connect and disconnect connector coupling.

#### Weight Capacity:



**NOTE: SEE BED FRAME MANUFACTURER'S MANUAL FOR BED FRAME WEIGHT RATING.**

This system is used for patients who weigh between 90 lbs. and 1000 lbs. (40 Kg. and 455 Kg.)



**NOTE: FOR PATIENTS WEIGHING <90 LBS. PLEASE CALIBRATE THE SYSTEM USING A PERSON WEIGHING 100 LBS. OR MORE.**

Standard Mattress: 500 lbs. (40-227 Kg.) maximum

Bariatric Mattress: 1000 lbs. (455 Kg.) maximum

Standard Raised Side Bolster Mattress: 90-500 lbs. (227 Kg.)

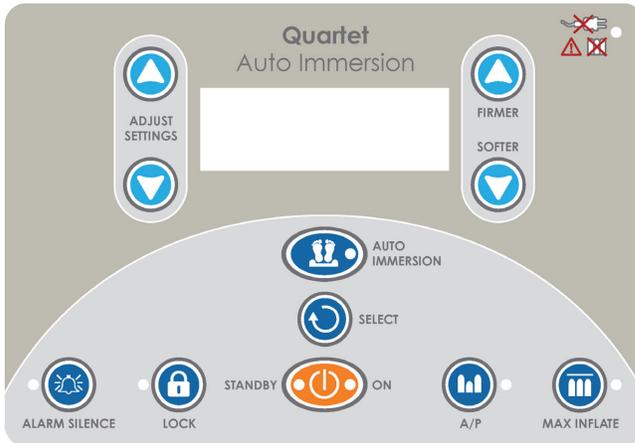
Bariatric Raised Side Bolster Mattress: 1000 lbs. (455 Kg.) maximum

Universal Mattress (for use with recessed deck): 500 lbs. (227 Kg.) maximum

Expandable Mattress (XM): 1000 lbs. (455 Kg.)

### 3.5 Quick Reference Guide – Quartet

## Quartet™ Quick Reference Guide



**POWER**  
Press the POWER button. The STANDBY (amber) LED will turn off and the ON (green) LED will turn on.

**ADJUST SETTINGS**  
Press the ADJUST SETTINGS arrows to set various therapy times and patient settings.

**ALTERNATING PRESSURE (A/P)**  
To set ALTERNATING PRESSURE (A/P), press the A/P button. Use the ADJUST SETTINGS arrows to select the desired A/P time, between 1-99 minutes.

**AUTO IMMERSION**  
With patient on the mattress, press the AUTO IMMERSION button and the blue LED will turn on. The surface will monitor and automatically adjust immersion settings to match patient weight and position.

**LOCK**  
Press and hold the LOCK button until the LED light turns on, to prevent tampering of settings. To unlock mattress settings, press and hold the LOCK button until the LED light turns off.  
*Note: MAX INFLATE mode is still functional in "LOCK" mode.*

## Quartet™ Quick Reference Guide



**MAX INFLATE**  
Press the MAX INFLATE button and the mattress will inflate to its maximum volume within 60 seconds (MAX INFLATE automatically deactivates after 15 minutes).

*Note: A series of beeps will sound every three minutes as a reminder that MAX INFLATE mode has been activated.*

**PATIENT COMFORT CONTROL LEVEL**  
The system is designed for patients weighing between 35-500 lbs., or up to 1000 lbs. on the bariatric model. Press the COMFORT CONTROL arrows to soften or firm the mattress to the patient's preferred comfort level.

**SELECT**  
The SELECT button cycles between the *Pulse* and *Fowler* therapy modes. To select the desired mode, press the SELECT button until that mode is shown on the display. Use the ADJUST SETTINGS arrows to select pulsation frequency.

*Note: For custom settings only, FOWLER mode will enable the mattress to transition to an upright position when the head of bed is articulated to 35° or greater.*

**ALARM SILENCE**  
Press the ALARM SILENCE button the control unit "beeps" to mute audio alarm (ALARM SILENCE will time out in 10 minutes).

**BED EXIT ALARM**  
To enable the bed exit alarm, press and hold the ALARM SILENCE button until the control unit "beeps" and follow the instructions on the screen.

**POWER STATUS**  
Notification that the unit is running off electrical power and the battery is charging.

**BATTERY POWER**  
Notification that the unit is running on battery and the batteries are discharging. Displays percentage of battery capacity when the unit is running on either AC power or battery power.

**LOW PRESSURE**  
The micro-controller will activate an audio/visual signal to alert the caregiver by flashing "LOW PRESSURE" on the digital display. Once the low-pressure problem is fixed, the audio/visual signal will cease.

**SAFETY AIR PAD**  
The safety air pad is below the air cells and stays inflated in case of loss of air or electrical power.

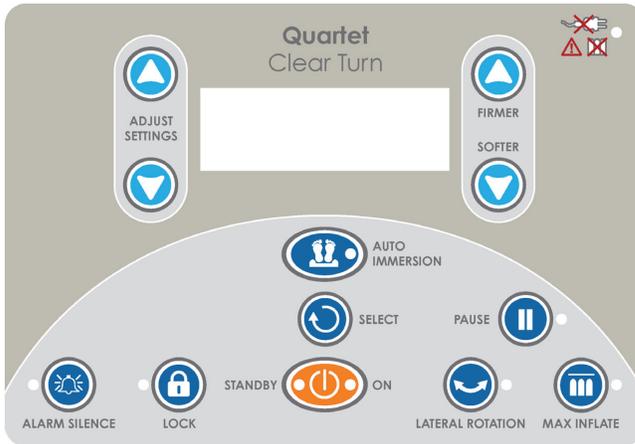
**CPR FUNCTION**  
To deflate the mattress for a CPR procedure, disconnect the hose from the control unit and rotate CPR valve to "OPEN".

**⚠️** Please read user manual for operating instructions and [www.oncaremedical.com](http://www.oncaremedical.com) for additional product information.  
For further questions, please call your local UHS office or call **1.800.847.7368**.

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### 3.6 Quick Reference Guide – Quartet Clear Turn

#### Quartet™ Clear Turn Quick Reference Guide



**POWER**  
Press the POWER button. The STANDBY (amber) LED will turn off and the ON (green) LED will turn on.

**LATERAL ROTATION**  
Press the LATERAL ROTATION button to access the menu. Press the SELECT button to toggle between options:  
• Left  
• Right  
• Dwell

Use the ADJUST SETTINGS buttons to set times and degrees or press the PAUSE button to turn a function off. Press the LATERAL ROTATION button to exit the menu and begin turning.  
*Note: The turn angle and turn time must be set before rotation begins.*

**PAUSE**  
Press the PAUSE button to halt mattress rotation. To set the pause time, hold the pause button for 2-3 seconds and use the ADJUST SETTINGS arrows to set the the pause time between 5-120 minutes (default is 15 minutes). To exit the menu, press the SELECT button.

**AUTO IMMERSION**  
With patient on the mattress, press the AUTO IMMERSION button and the blue LED will turn on. The surface will monitor and automatically adjust immersion settings to match patient weight and position.

**LOCK**  
Press and hold the LOCK button until the LED light turns on, to prevent tampering of settings. To unlock mattress settings, press and hold the LOCK button until the LED light turns off.  
*Note: MAX INFLATE mode is still functional in "LOCK" mode.*

#### Quartet™ Clear Turn Quick Reference Guide



**MAX INFLATE**  
Press the MAX INFLATE button and the mattress will inflate to its maximum volume within 60 seconds (MAX INFLATE automatically deactivates after 15 minutes).

*Note: A series of beeps will sound every three minutes as a reminder that MAX INFLATE mode has been activated.*

**PATIENT COMFORT CONTROL LEVEL**  
The system is designed for patients weighing between 35-500 lbs., or up to 1000 lbs. on the bariatric model. Press the COMFORT CONTROL arrows to soften or firm the mattress to the patient's preferred comfort level.

**SELECT**  
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*Note: For custom settings only, FOWLER mode will enable the mattress to transition to an upright position when the head of bed is articulated to 35° or greater.*

**ALARM SILENCE**  
Press the ALARM SILENCE button the control unit "beeps" to mute audio alarm (ALARM SILENCE will time out in 10 minutes).

**BED EXIT ALARM**  
To enable the bed exit alarm, press and hold the ALARM SILENCE button until the control unit "beeps" and follow the instructions on the screen.

**POWER STATUS**  
Notification that the unit is running off electrical power and the battery is charging.

**BATTERY POWER**  
Notification that the unit is running on battery and the batteries are discharging. Displays percentage of battery capacity when the unit is running on either AC power or battery power.

**LOW PRESSURE**  
The micro-controller will activate an audio/visual signal to alert the caregiver by flashing "LOW PRESSURE" on the digital display. Once the low-pressure problem is fixed, the audio/visual signal will cease.

**SAFETY AIR PAD**  
The safety air pad is below the air cells and stays inflated in case of loss of air or electrical power.

**CPR FUNCTION**  
To deflate the mattress for a CPR procedure, disconnect the hose from the control unit and rotate CPR valve to "OPEN".

Please read user manual for operating instructions and [www.oncaremedical.com](http://www.oncaremedical.com) for additional product information. For further questions, please call your local UHS office or call 1.800.847.7368.  
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### 3.7 Quick Reference Guides – Quartet Turn Assist

#### Quartet™ Turn Assist Quick Reference Guide



**POWER**  
Press the POWER button. The STANDBY (amber) LED will turn off and the ON (green) LED will turn on.

**TURN ASSIST**  
Press and hold one of the TURN ASSIST buttons and use the SELECT button to toggle between options:

- Centering Function
- Turn Degree
- Turn Time

Use the ADJUST SETTINGS buttons to set the above options. To exit the menu, press the PAUSE button. Press the same TURN ASSIST buttons and the surface will begin turning.

**PAUSE**  
Press the PAUSE button to halt mattress rotation. To set the pause time, hold the pause button for 2-3 seconds and use the ADJUST SETTINGS arrows to set the pause time between 5-120 minutes (default is 15 minutes). To exit the menu, press the SELECT button.

**AUTO IMMERSION**  
With patient on the mattress, press the AUTO IMMERSION button and the blue LED will turn on. The surface will monitor and automatically adjust immersion settings to match patient weight and position.

**LOCK**  
Press and hold the LOCK button until the LED light turns on, to prevent tampering of settings. To unlock mattress settings, press and hold the LOCK button until the LED light turns off.  
*Note: MAX INFLATE mode is still functional in "LOCK" mode.*

#### Quartet™ Turn Assist Quick Reference Guide



**MAX INFLATE**  
Press the MAX INFLATE button and the mattress will inflate to its maximum volume within 60 seconds (MAX INFLATE automatically deactivates after 15 minutes).

*Note: A series of beeps will sound every three minutes as a reminder that MAX INFLATE mode has been activated.*

**PATIENT COMFORT CONTROL LEVEL**  
The system is designed for patients weighing between 35-500 lbs., or up to 1000 lbs. on the bariatric model. Press the COMFORT CONTROL arrows to soften or firm the mattress to the patient's preferred comfort level.

**SELECT**  
The SELECT button cycles between the Pulse and Fowler therapy modes. To select the desired mode, press the SELECT button until that mode is shown on the display. Use the ADJUST SETTINGS arrows to select pulsation frequency.

*Note: For custom settings only, FOWLER mode will enable the mattress to transition to an upright position when the head of bed is articulated to 35° or greater.*

**ALARM SILENCE**  
Press the ALARM SILENCE button the control unit "beeps" to mute audio alarm (ALARM SILENCE will time out in 10 minutes).

**BED EXIT ALARM**  
To enable the bed exit alarm, press and hold the ALARM SILENCE button until the control unit "beeps" and follow the instructions on the screen.

**POWER STATUS**  
Notification that the unit is running off electrical power and the battery is charging.

**BATTERY POWER**  
Notification that the unit is running on battery and the batteries are discharging. Displays percentage of battery capacity when the unit is running on either AC power or battery power.

**LOW PRESSURE**  
The micro-controller will activate an audio/visual signal to alert the caregiver by flashing "LOW PRESSURE" on the digital display. Once the low-pressure problem is fixed, the audio/visual signal will cease.

**SAFETY AIR PAD**  
The safety air pad is below the air cells and stays inflated in case of loss of air or electrical power.

**CPR FUNCTION**  
To deflate the mattress for a CPR procedure, disconnect the hose from the control unit and rotate CPR valve to "OPEN".

**⚠** Please read user manual for operating instructions and [www.oncaremedical.com](http://www.oncaremedical.com) for additional product information. For further questions, please call your local UHS office or call 1.800.847.7368.

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## 4.0 SYSTEM SET-UP

### 4.1 Unpacking the System



**CAUTION:** It is highly recommended that the Quartet mattress always be installed on medical bed frames that are equipped with standard hospital side rails or assist rails. Please raise all 4 side rails on the bed and lock them in position after the patient is on the mattress. Health care professionals assigned to each case should make the final determination whether side or assist rails are warranted after assessing patient risks of entrapment and falls in accordance with State patient restraint legislation or facility interpretation of such legislation. Mattress **MUST** fit bed frame and side rails snugly to prevent patient entrapment.

Check that all air hoses and power cord are clear of moving bed components before placing a patient on the bed and that the mattress is fully inflated. Operate all bed frame motorized functions through their full range of motion to be certain that there is no pulling, interference or pinching.



**NOTE:** When opening the large system box or the small control unit box, ensure that the object used to open the box does not penetrate and damage the components inside.

#### Components Supplied:

- Complete replacement mattress system box: 1 control unit box and 1 mattress
- Control unit box: 1 control unit, 1 operating instruction manual, 1 power cord

#### Unpacking and Inspection:

Before accepting and signing for your shipment, please inspect the box or boxes for external and internal damage. Verify that the number of boxes listed on the packing list matches the number of boxes received. Verify that no components in your shipment are damaged or missing. Report any missing boxes, components and or damage to the transportation carrier immediately.

### 4.2 System Set-Up



**NOTE:** Before using the Quartet Mattress System, please remove current mattress, mattress replacement systems or overlay systems from the bed.

When installing the Quartet mattress system, do not exceed the manufacturers maximum weight of the mattress or the bed frame. See the bed manufacturer's manual for bed frame weight rating.

## 4.3 Replacement Mattress System

- Unroll the replacement mattress and place it on the bed frame.
- Make sure that the hose end of the mattress is towards the foot of the bed.



**NOTE:** Make sure mattress is strapped securely to the bed frame and it does not slide on the bed frame.

- There are ten nylon black straps with D-rings, two straps at the head of the mattress, two on the foot of the mattress, and three on each side of the mattress. Loop each strap around the bed deck and secure using the D-ring. **NOTE:** Make sure Head, Knee and Foot sections of the bed can be raised and the straps are secured to the deck and not to the frame. Once the mattress is strapped, tuck the exposed straps under the mattress.
- Pull out the hanger on the back of the control unit and suspend the control unit from the footboard of the bed. If the bed you are using does not have a footboard, place the control unit on its base (not on its back where the filter is located) on a flat surface in front of the bed near the foot of the bed frame.
- Confirm the air inlet vent on the control unit is not covered, and the control unit is not placed on the floor in such a manner that it is a hazard for flow of traffic or lowering of bed frame.
- Uncoil the power cord and plug the cord into the appropriate AC power source, which is properly grounded. Run the power cord through the power cord management zippered pocket located on the base of the mattress on the patient's right hand side. Plug the other end of the power cord into the control unit and press it in place.



**NOTE:** Care should be taken such that the power cord of the control unit is not pinched, or has any objects placed on it. Ensure it is not located where it can be stepped on or tripped over. Make sure the control units power inlet connection is positioned to easily disconnect the power cord from the unit.

- The mattress hose will run from the base of the mattress on the right, under the Control Unit (if positioned hanging from the foot of the bed) to connect on the left side of the Control Unit. Make sure the black data cable coming out of mattress hose is properly connected to the data port on the control unit, see Data Cable image in Operating Instructions for reference on page 22.



**NOTE:** Quartet Series – Make sure the magnetic connector has a good connection. Also, care should be taken such that the mattress hose is freely suspended without being pinched or kinked.

- Make sure the CPR valve is in the closed position before inflating the mattress.
- Make sure the left and the right side safety air bolsters (if available) as well as the bottom safety air pad are fully inflated and firm prior to placing a patient on the mattress.

## 5.0 OPERATING INSTRUCTIONS



**NOTE:** Not all functions are available on all models (see symbols on page 12).

### INITIAL POWER UP

During initial power up when power cord is plugged into the power source, the control unit will display ("AUTO IMMERSION" LOW AIR LOSS SYSTEM) for a brief moment and then goes through a system initialization routine for a few seconds. Once the routine is completed the display will read "FULL BODY IMMERSION TECHNOLOGY STAND BY".



### POWER

Press POWER key, the amber Standby LED will turn off and the green LED will turn on. The blower will turn on and inflate the mattress.

For standard and bariatric mattresses, press the MAX Inflate button to speed inflation. For Clear Turn and TA (Turn Assist) mattresses, the screen will read "Bolster Fill – Please wait...". After the bolsters are filled, the main screen will appear and you can make your set up selections.



### MAX INFLATE

Press MAX INFLATE button, the blue LED will turn on. This mode is used to rapidly inflate the mattress. During this mode a series of beeps will sound every 3 minutes as a reminder that MAX INFLATE mode has been activated. During this mode, the entire mattress will be pressurized to  $35 \pm 5$  mmHg. The mattress will inflate to its normal size within 60 seconds. To deactivate, press the MAX INFLATE button again and the LED will turn off or the MAX INFLATE mode will deactivate automatically after 15 minutes.

For extra firm support during patient ingress or egress, patient wound care, patient turning or patient cleaning it is recommended to set the mattress pressure to maximum pressure by pressing MAX INFLATE button.



### AUTO IMMERSION (AI)

This feature can be enabled by pressing the AI button. It will automatically immerse the patient to his or her optimal comfort level regardless of their weight and position and redistribute pressure, minimize shearing and friction to avoid tissue breakdown.



**NOTE:** See bed frame manufacturer's manual for bed frame weight rating.

The Quartet Mattresses are designed for patients who weigh between 90 lbs. and 1000 lbs. (40 Kg. and 455 Kg.). For patients weighing <90 lbs. please calibrate the system using a person weighing 100 lbs. or more.

- For proper calibration of the AUTO IMMERSION feature, it is recommended that the patient is flat in static mode (not turning) on the bed before enabling this feature.
- For UMS (Universal Mattress System) mattresses, press and hold the Auto Immersion button until the menu appears. Select "UMS" by pressing the firmer/softer keys until "UMS" is displayed on the bottom box. Press the Auto Immersion button to save and exit menu.
- Note: For UMS mattresses, the UMS valve on the mattress must be on setting #3 for full inflation (9" mattress).





## BATTERY

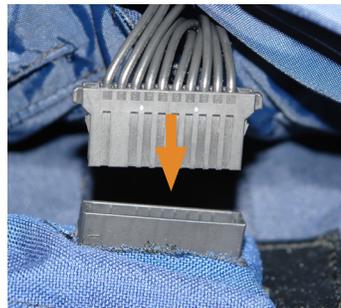
- Plug in the control unit to charge battery. When battery is charging, the battery symbol will appear on the display.
- In the event of a power outage, the control unit will automatically switch to battery mode and the battery charge percentage will be displayed.
- Please note: The Quartet mattress is designed to be run on AC power and should be plugged in whenever possible. The dual battery will provide between 2 and 8 hours of backup power dependent on the settings being utilized. The battery symbol will provide an indication of the amount of charge remaining.
- Battery is replaceable and should only be replaced by a manufacturer qualified technician if defective.
- Refer to Care and Maintenance for additional battery information.

## DATA CABLE

- Ensure the mattress hose black data cable is properly connected to the control unit data port by inserting then rotating the barrel of cable to secure. (see image on right).

## MODULES IN MATTRESS

- For proper functionality of the mattress system, ensure the data cables are connected to both of the modules found inside the mattress. The modules can be found at the foot and head ends of the mattress underneath the air cells. Ensure that the 10 pin connectors properly connected to the modules. You will hear a click when inserting the connector into the module.
- For Clear Turn and Turn Assist, make sure the inclinometer is properly connected. The inclinometer can be found on the inside wall of the mattress on the patient's right-hand side of the mattress.



## BED EXIT ALARM

- To activate sensors, ensure bed is calibrated on auto immersion. Once this is completed, any therapy can be used.
- To enable the BED EXIT ALARM press and hold the ALARM SILENCE button. When the Bed Exit Alarm screen appears, use the ALARM SILENCE button to move between on and off. Once you've made your selection, press the SELECT button to return to the main screen.

BED EXIT ALARM alarms the caregiver in the event that the patient has exited the bed.



## PATIENT COMFORT CONTROL LEVEL

- The system (custom settings only) is designed for patients weighing between 35 - 1000 lbs. (15 Kg. - 455 Kg.). By pressing the COMFORT CONTROL arrow towards the SOFTER position reduces the pressure setting, and the FIRMER position increases the pressure. The patient comfort pressure ranges from SOFT  $6 \pm 5$  mmHg to FIRM  $32 \pm 5$  mmHg. Depending on the desired patient comfort level, the control unit will increase or decrease the speed of the air blower to provide the appropriate air flow into the mattress to maintain the desired pressure in the mattress



## ALTERNATING PRESSURE (A/P)

- In A/P mode, alternate air cushions will inflate to the patient comfort pressure while those cushions between the inflated air cushions will deflate.
- To set ALTERNATING PRESSURE (A/P), press the A/P button, then use the ADJUST SETTINGS arrows to select the desired A/P time, 1 to 99 minutes.
- To adjust the Alternating Pressure high/low and fast/slow pressures, press and hold the A/P button until the A/P screen appears. Use the Adjust Settings buttons to set the low pressure. Use the comfort control buttons to set the high pressure. Use the Select button to select between a fast or slow transition time. Then press the AI button when you've completed your selections to return to the main menu.



## SELECT

- The SELECT button is used to cycle between the following therapy modes: *Immersion, Pulse and Fowler.*

## IMMERSION

- To manually adjust the immersion setting, first ensure the AI (Auto Immersion) LED is off.
- Press the select button until "Immersion" is displayed on the screen. Now you can adjust the settings to optimize the patient's comfort by utilizing the COMFORT CONTROL arrows.

Pressing the COMFORT CONTROL arrow towards the SOFTER position reduces the pressure setting, while the FIRMER position increases the pressure setting. The patient comfort pressure ranges from softest at  $6 \pm 5$  mmHg to the firmest at  $32 \pm 5$  mmHg.

## PULSE

- To set *Pulse* mode, press SELECT button until the display shows *Pulse*.
- Use the ADJUST SETTINGS arrows to select the desired pulsation interval time (1 – 99 minutes).
- During Pulse mode, the pressure in each air cell will be increased 60% (will not exceed 32 mmHg) for 30 seconds and then decreased to the prior pressure setting for 1 minute (or time selected). This cycle will continue every minute (or time selected) as long as pulsation is enabled.

## FOWLER

- If a patient is in an upright position (when the bed frame is articulated to 35° or greater) the Quartet should be placed into the Fowler mode. The unit will maintain 80% more pressure than the set pressure (up to max to 32 ± 5 mmHg) in the center of the mattress in order to keep the patient supported without the risk of bottoming out.
- Fowler mode is selected by pressing the SELECT button until Fowler is displayed.
- PLEASE NOTE: If a patient has been calibrated in Auto Immersion Mode, selection of FOWLER mode is unnecessary since the intelligent auto immersion software will make the appropriate adjustments to prevent the risk of bottoming out.



## LOCK

- Control unit functions (including power switch) can be completely locked out to prevent tampering of settings by simply pressing and holding the LOCK button until the light comes on (approximately 5 seconds). To deactivate, simply press and hold the LOCK button until the light turns off.
- MAX INFLATE mode is still functional in Lock Out mode.



## ALARM SILENCE

Mutes the audio alarms (times out in 10 minutes).



## POWER FAIL



**NOTE:** This mode will not activate if the batteries are charged.

In the event of a power outage, the microprocessor will activate an audiovisual signal to alert the caregiver by flashing the amber POWER FAIL LED and turning on the buzzer. Once the power is restored to the control unit the audio/visual signals will cease and the unit will resume operating at its set mode.



## LOW PRESSURE

In the event of a connector hose disconnection, the Micro-controller will activate an audio/visual signal to alert the caregiver by flashing LOW PRESSURE on the digital display. Once the low-pressure problem is fixed, the audio/visual signal will cease and the unit will resume its operating set mode.

## BOTTOM SAFETY AIR PAD

The BOTTOM SAFETY AIR PAD is a 2" air pad that will remain inflated should the controller be turned off inadvertently or the battery becomes depleted to prevent bottoming out.

## CPR FUNCTION – AIR MATTRESS

- To deflate the mattress for a CPR procedure, first turn the red CPR valve to “open” (at foot end of mattress on patient's right side). This will allow the air to escape and the mattress to deflate.
- Second turn off unit (press and hold LOCK button if in lock mode).
- To further speed the deflation, disconnect the mattress hose connector from the control unit.



## HEEL ZONE REGULATOR

Heel Zone Pressure can be adjusted independently from the rest of the mattress zones, if desired. The Heel zone, which has four to six air cells, can be adjusted to four different pressure settings.

To set the required pressure in the Heel Zone, turn the Heel Knob to the desired position. Match the SET NUMBER to the metal pin at the right of the Heel knob.



## UNIVERSAL MATTRESS SYSTEM (UMS)

The Universal Mattress System is designed for use with recessed deck bed frames. The mattress can adjust in height (6" or 9") and expand in length (74", 78", 82" and 86"). The UMS Mattress is supplied as an 86" mattress. To reduce the mattress length, unzip the mattress cover and unplug air cells starting with the most distal. The removal of each air cell will reduce the mattress length by 4". Do not remove more than 3 air cells.

The Universal Mattress (UMS) has a four (4) position valve located at the right, foot end of the mattress. This valve and the associated supplemental bladders (at base of mattress) allow the UMS mattress to be inflated and fill the recessed deck of the bed frame.

For normal operation on a recessed deck bed frame, place the selector valve to setting #3 (9" mattress).

- To inflate only the torso (Heel Slope) of the mattress to a 9" mattress, rotate the valve selector to position #2.
- The mattress can be used for patient transportation by rotating the valve selector to position #1.

Note: make sure the bottom bladders are inflated.  
This can be achieved by using valve selector position #3.

- Valve selector position #4 will deflate the supplemental bladders and return the mattress to a 6" mattress. To fully deflate the Universal Mattress System (UMS), turn the CPR valve to OPEN and remove the hose from the control unit connector.



## EXPANDABLE MATTRESS SYSTEM (XMS)

The Quartet Expandable Mattress has the ability to expand in width (36", 42" and 48") and in length (80", 84" and 88") by using the mattress expansion regulator valves.

The Expandable Mattress System (XMS) has two (2), four (4) position valves; the width expansion regulator valve is located on the right foot end of the mattress and the length expansion regulator valve is located on the left foot end of the mattress.



1. To extend mattress width, rotate the valve selector to the appropriate width.
2. To deflate the expansion bladders, rotate valve to Position #4 then return to #1-#3.



1. To extend mattress length, rotate the valve selector to the appropriate position.
2. To deflate the expansion bladders, rotate valve to Position #4 then return to #1-#3.

To fully deflate the Expandable Mattress System (XMS), set the valve selector to position #4 on both expansion regulator valves, turn the CPR valve to OPEN and remove the hose from the control unit connector.

When expanding or contracting the Expandable Mattress System (XMS), tighten or loosen the mattress straps to ensure the mattress is strapped securely to the bed frame and it does not slide on the bed frame.

## PATIENT TRANSPORTATION – AIR MATTRESS

- a. To transport a patient without removing the patient off the bed, disconnect the power cord from the power source and roll it up on the control unit securely.
- b. The control unit will enter into battery mode once power cord is disconnected (if battery is charged). The dual battery will provide between 2 and 8 hours of backup power dependent on the settings being utilized and level of charge. The battery symbol will provide an indication of the amount of charge remaining.
- c. The mattress has a 2" air pad to provide support to the patient if/when the battery is depleted and the mattress is deflated. It is not recommended to keep the patient on the mattress for long periods of time when the mattress air cushions are deflated.

## 5.1 Additional Operating Instructions – Clear Turn Mattress

The Quartet Clear Turn Mattress provide continuous lateral rotation for those patients that would benefit from continuous movement, such those with respiratory or neurologic issues.



### LATERAL ROTATION

To set Lateral Rotation therapy, press the LATERAL ROTATION button.

#### Adjusting Rotation Side and Cycle Time:

- To adjust rotation side and or rotation cycle time, press the LATERAL ROTATION button. Cycle time and rotation sides will be displayed in the screen. Use the ADJUST SETTINGS arrows to adjust the cycle time for the Left side. Press the SELECT button to move down to the adjust the Right side cycle time. Press the SELECT button again to adjust the dwell cycle time (no rotation). All cycle times have a minimum of 1 minute and maximum of 4 hours) Press the PAUSE key to turn off a rotation side function if desired.
- Press the LATERAL ROTATION button again to adjust the degree of rotation (angle). Degree of turn; 5-45 degrees. Use the ADJUST SETTINGS ARROWS button to adjust the degree of rotation for the left side then press SELECT button to adjust the right side
- Press LATERAL ROTATION button once more to activate the rotation mode based on the selected settings and return to the main screen.
- Press and hold the LATERAL ROTATION button to enable or disable the centering function. Use the SELECT button to set desired setting. Press LATERAL ROTATION button to return to main screen

When a rotation angle higher than 25° is selected (Quarter Clear Turn Only), an air cushion under the mattress will be inflated in combination with the standard air cushions to achieve the rotation angle desired.

In rotation mode, depending on the rotation cycle, the left or the right air cushions in the mattress will be inflated or deflated. During the dwell cycle the air cushions will be maintained at a constant desired patient comfort pressure.

In the left rotation mode, the right air cushions in the mattress will be maintained at a constant high pressure, and the left air cushions will be maintained at a constant low pressure and vice versa for the right rotation mode. Rotation will continue back and forth and stop in the dwell (no turn) position in between each left and right cycle.

Please Note: Continuous lateral rotation will be disabled should the Head of Bed be raised higher than 35°

## 5.2 Additional Operating Instructions – Turn Assist Mattress

The Quartet Turn Assist Mattress is designed to reduce the physical demands on caregivers when turning and repositioning patients.



### TURN ASSIST

To set TURN ASSIST therapy, press the RIGHT TURN ASSIST button for right turn or LEFT TURN ASSIST button for left turn. Degree of turn; 5-25 degrees.

#### Adjusting Time Cycle/Degree of Turn:

- To adjust turning degree and/or turning cycle time, press and hold the RIGHT TURN ASSIST button or LEFT TURN ASSIST button depending on which turning side is desired. The screen will display the different settings that can be adjusted.
- Centering function can be turned on or off. Degree of turn can be adjusted from 5 degrees to 25 degrees.
- Turning cycle times can be adjusted from 5 minutes to 2 hours. To make changes/adjust settings follow instructions on screen.
- When settings have been adjusted, press the PAUSE button to exit set up screen.

The turn settings established for one side can be duplicated to the other side by pressing and holding both turn buttons while in the set up screen.

## 5.3 Additional Operating Instructions for both Clear Turn and Turn Assist Mattresses



### PAUSE

- The PAUSE function is activated by pressing the PAUSE button. This function pauses the Turn Assist therapy cycle time (Quartet Turn Assist) or Lateral Rotation therapy cycle time (Quartet Clear Turn).
- To adjust/change the duration of the pause feature, press and hold the PAUSE button, the screen will display "SET PAUSE DURATION". Follow instructions on screen to adjust times. To exit the set-up screen, press the SELECT button.



### SELECT

The SELECT button is used to cycle between the following therapy modes: *Immersion, Pulse and Fowler.*

#### Fowler:

- This mode is selected by pressing the SELECT key until "FOWLER" is displayed on the screen. In Fowler mode the unit will maintain 80% more pressure than the set pressure (up to max to  $32 \pm 5$  mmHg) in the torso section of the mattress in order to keep the patient supported without the patient being bottomed out (when bed is articulated).
- HEAD OF BED (HOB). When the head section of the bed frame is articulated "HOB" will be displayed on the top right-hand corner of the screen. It will display the degree of articulation of the bed when it is being articulated. The unit will automatically go into Fowler mode without the caregiver's or the patient's assistance and maintain pressures in the mattress as explained above. This is achieved by an inclinometer sensor in the mattress.



**NOTE:** During FOWLER mode, Rotation mode is disabled on both the Quartet Turn Assist and the Quartet Clear Turn mattress models. When Fowler mode is activated (manually or automatically) the rotation function will cease if active and Fowler mode will be activated.

- To manually set the Fowler activation degree, press and hold the SELECT button and LATERAL ROTATION (Clear Turn) or RIGHT TURN (Turn Assist) while in Standby. Use the ADJUST SETTINGS arrows to select the degree.



### BOLSTERS

The left and the right bolsters can be manually deflated by rotating the CPR valve which is at the bottom-right corner (patient's right) of the mattress. The entire mattress will deflate.



**NOTE:** Before using the mattress please make sure that the CPR valve is in the "closed" position.

## 6.0 CLEANING PROCEDURES



**CAUTION:** Before attempting to clean the control unit, turn off and disconnect the power cord from the power source.

**DO NOT HEAT, STEAM AUTOCLAVE, OR IMMERSER THE CONTROL UNIT IN LIQUIDS.**

### 6.1 Cleaning the Control Unit

1. Wear eye goggles and protective gloves before starting the cleaning procedure.
2. The following germicidal detergents / disinfectants are recommended by the EPA as hospital disinfectants.
  - a. Johnson Wax, Virex 128, EPA Registration Number 47371-130-4822.
  - b. Quaternary Detergent-Disinfectant by Airkem Professional Products, Division of Ecolab, Inc., Ecolab Center, St. Paul, Minnesota. EPA registration number: EPA #42964-5.
  - c. Hi-Tor Germicidal Detergent by Huntington, Laboratories, Inc. Huntington, Indiana. EPA registration number: EPA # 303-91.



**NOTE:** A spray bottle of fresh disinfectant/detergent solution should be prepared daily to clean the control unit.

3. Prepare the required amount of solution by following the preparation instructions provided with the germicidal detergent/disinfectant solution.
4. Pour required amount into a spray bottle.
5. Use a brush or cloth to wipe off dust. Spray the exterior of the top and the bottom enclosures, power cord and the cord plug with the prepared disinfectant/detergent solution. Allow the disinfectant to dry per the manufactures instructions, then using a damp cloth, wipe down the sprayed surface cleanly.  
 **NOTE:** Do not spray excess amount of solution on the control unit.
6. Once the control unit is clean, wipe the unit, power cord, cord receptacle, and the cord plug with a clean dry cloth.
7. Place the control unit to dry in a cool, dry area for an hour before operating or storing the unit. If the control unit is not used immediately, place the control unit in a plastic bag and store it in a storage area.
8. After the cleaning operations are completed, remove and dispose the protective gloves appropriately. Wash your hands thoroughly with antibacterial soap.

## 6.2 Cleaning the Mattress

### Routine Cleaning

1. Wear eye goggles and protective gloves before starting the cleaning procedure.
2. Follow steps 2 through 4 in the Cleaning the Control Unit Section 6.1 to prepare disinfectant solution.
3. Spray all mattress surfaces with disinfectant and allow to dry per manufacturer's instructions.
4. Using a damp cloth, wipe down the air cushions and the mattress base. Once the air cushions and the base are clean, wipe them down with a dry cloth.



**CAUTION:** To prevent damage, please remove the data cable, modules, inclinometer (if applicable) and the air pad cover from the mattress before laundering.

### Laundering

1. Air cushions should be washed periodically; top sheet will require more frequent washing. Set wash cycle to "heavy load" with warm water. Once the water is full, add manufacturer- suggested quantity of laundry detergent and/ or standard hospital disinfectants. If the air cushions or the top sheet becomes soiled with human waste or blood, clean immediately by wiping down. Use hospital recommended laundry detergent and/ or disinfectant per manufacturer's instructions.

NOTE: Use non-chlorine bleach detergent.

2. Shake cushions gently to remove excess water from inside the air cushions. Dry the cushions/top sheet on the lowest settings on the dryer until completely dry.
3. Leave the mattress to dry in a cool, dry area for an hour before using or storing. If the mattress is not used immediately, roll the mattress and insert it into a plastic bag and store it in a storage area.
4. After the cleaning operations are completed, remove and dispose the protective gloves appropriately. Wash your hands thoroughly with antibacterial soap

## 7.0 CARE AND STORAGE

1. When the control unit is not in use, turn off the unit, disconnect the power cord from the power source and wrap the cord around the control unit. To conserve battery life if system is not in use or in storage, while the unit is off, press the two   ARROW buttons until the screen turns on and states "DISCONNECTING BATTERY FROM SYSTEM" and then will turn off again. Place the control unit and the power cord in a plastic bag and cable tie it to keep the unit dust-free.

NOTE: To enable system to operate using the battery after disconnecting the battery from the system, simply plug in the system to a power source. Once power is reestablished the power cord can be disconnected.

2. Fold or roll the previously dried air mattress and place the mattress in a plastic bag. Cable tie the plastic bag to keep the mattress dust free. Cover and store the mattress in a flat position.
3. Store the control unit in a storage area designated for medical electronic product storage.

### 7.1 Preventive Maintenance

It is important to periodically test the control unit to verify its functionality. If the unit's air pressure reading is out of specification it can result in poor or reduced patient support.



**NOTE: CLEAN THE AIR FILTERS EVERY 3 MONTHS OR WHENEVER DIRTY.** Remove the 4 filter screws on each filter from the back of the unit and separate filter foam. Wash filter foam using soap and water. Dry and replace filters back on the unit and fasten screws.



**NOTE:** All preventive maintenance service, performance and electrical tests, or repairs should be performed only by factory authorized and qualified technical personnel.

## 8.0 TROUBLESHOOTING GUIDE

Technical Service: 800.847.7368



**NOTE:** THE FOLLOWING INFORMATION IS FOR FACTORY AUTHORIZED SERVICE FACILITIES AND FACTORY QUALIFIED SERVICE PERSONNEL ONLY.

Agility can provide technical support to factory qualified technical personnel. Contact Agility Technical Service department for more information.

PROBLEM	POSSIBLE CAUSE	SOLUTION
Mattress not inflating properly	Mattress hose disconnected	Ensure hose connectors are securely in place. If this occurs while in Auto Immersion, it is recommended that the Auto Immersion feature be recalibrated on the unit. This can be achieved by pressing the Auto Immersion button.
	Air hose kinked or split	Unkink hose or replace split hose.
	Major leak in the air cushion or overlay pad	Replace leaking air cushion or air pad. And bolsters.
	Kinked or split manifold	Unkink manifold or replace split manifold.
	Control unit not working	Send control unit back to factory for repair.
	Blower malfunction	Send control unit back to factory for repair.
No power	Control unit off	Check power source and turn unit on.
	Power cord disconnected	System back up battery will be enabled (if battery is charged) and/or connect cord to power source.
	No power in the power source	Check power source has power and turn it "ON". If no power on power source, send back to factory for repair.
	Power outage	Back up battery system will be automatically enabled (if battery is charged).
	Blown fuse	Send control unit back to factory for repair.
Control unit not responding	Unit locks up	Unplug power cord from control unit. Put the unit in "Standby" mode using the POWER button. Press and hold  SOFTER and  ADJUST SETTINGS Arrows to disconnect the battery. Once disconnected, plug in the power cord to re-boot the unit.
Modules not found	Data cable disconnected	<ol style="list-style-type: none"> <li>1. Check the connection of the Data Cable to the control unit. If disconnected, connect and retry.</li> <li>2. Check the connection of the Data Cable to the Foot Module inside the mattress (at the foot end of the bed). If disconnected, connect and retry.</li> <li>3. <i>This step applies to Clear Turn and Turn Assist models only:</i> Check the connection of the Data Cable on the module from the foot end of the mattress to the module (Inclinometer) on wall of mattress on patient's right hand side of bed. If disconnected, connect and retry.</li> <li>4. Check the Head Module inside the mattress (at the head end of the bed). If disconnected, connect and retry.</li> </ol>

## 9.0 WARRANTY

Agiliti warrants the control unit and the mattress for a period of ONE (1) year from the original date of purchase.

The standard warranty from Agiliti is extended to the original buyer purchasing the equipment directly from Agiliti or through its authorized dealers. All warranty periods, where applicable, commence on the date of purchase from Agiliti or its authorized dealers.

The sole obligation and liability of Agiliti under this warranty is limited to (at the option of Agiliti) the repair or replacement by authorized Agiliti personnel of any parts or assemblies, which upon test and examination by Agiliti, prove to be defective. This equipment may be returned prepaid to Agiliti after notification has been given and approval obtained for the return. Please call your Agiliti sales representative or customer service at 800.847.7368 to arrange for warranty services.

The liability of Agiliti under the warranty is the repair or replacement provided and, in no event, shall the liability of Agiliti exceed the purchase price paid by the customer of the product. Under no circumstances shall Agiliti be liable for any loss, direct, indirect, incidental, or special damages arising out of or in connection with the use of this product.

The control unit warranty does not cover normal maintenance such as cleaning, periodic electrical tests, performance tests, and updating of equipment or parts thereof. This warranty shall be void and not apply if the control unit, including any of its parts, is modified without written authorization from Agiliti, is attempted to be repaired by personnel not authorized by Agiliti, is not maintained in accordance with the prescribed preventive maintenance schedule, is used with accessories or parts not authorized by Agiliti, or is damaged due to misuse, mishandling, abuse, negligence, accident, fire, or inadequate packaging by owner for shipment of the control unit for service, upgrade, repair, retrofit, or product return. All reasonable freight charges for valid factory approved warranty returns will be reimbursed. Agiliti makes no guarantee of clinical results.

**THE WARRANTY STATED ABOVE (INCLUDING ITS LIMITATIONS) IS THE ONLY WARRANTY MADE BY AGILITI AND IS IN LIEU OF ALL OTHER WARRANTIES, WHETHER EXPRESSED OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. AGILITI SHALL NOT BE LIABLE FOR CONSEQUENTIAL OR INCIDENTAL DAMAGES OF ANY KIND.**

PART #	DESCRIPTION	FILE NAME	REV	ECO	DATE OF ISSUE
400876	QUARTET MATTRESS SYSTEM USER MANUAL	400876	C	18-0011	3/18



# ORDERING INFORMATION

Agiliti: 800.847.7368

## Accessories

- Standard size quilted breathable nylon Top Sheet.
- Bariatric size quilted breathable top sheets.

**Call Agiliti for additional accessories.**



**NOTE:** To place an order or for questions regarding the Agiliti Systems and its warranties, please contact Agiliti at 800.847.7368.





Smarter Products.  
Better Performance.