

Pro-care Turn Sales Kit

Brand Management Dept. 2019.01.25

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"A TURNing Point for Berrer Parient Care"

Pro-care Turn overview

Pro-care Turn is an Bilateral Turning Air Mattress that provides perfect prevention for patients in <u>high to very</u> <u>high risk of pressure injuries</u>.

Its 30° of bilateral rotation therapy is able to enhance pressure relief and the most important of all – be a great help to caregivers and make **effortless patient repositioning**.

Key Selling Points



30° for the Comfort Customized Therapy

Effortless Repositioning

30° for the Comfort



Enhancing Pressure Relief by 30° of Bilateral Rotation

- 30 degrees of turning not only complies with clinical guidelines but also provides optimal comfort.*3
- Bilateral rotation can significantly reduce interface pressure on patients' body whilst increase capillary circulation. *1*2
- Alternating function during dwell time.

Reference: p.16~p.20

Customized Therapy

Tailored for individual healthcare plans





- ✓ Customized for optimal performance
 ✓ Allowing caregiver to facilitate repositioning easily
- 3-in-1 Therapy Solution
- Alternating, turning, continuous low pressure are available
- Selectable turning angles and pressure levels for individual

Effortless Repositioning



✓ Benefit to both caregivers and patients

- Air mattress with bilateral turning function help caregivers to easily achieve repositioning
- Reduce the risk of lower back and arm injuries during repositioning

How does it turn & reposition

Turning cells on the back & bottom from the 4th 12th cells

- Cushioned support
- To free sacrum and trochanter areas from pressure
- To give heel slope
- Head is not turning and fixed by a pillow. (1st-3rd cells)

Essential accessories: repositioning pillow

- Between the knees and under upper armsFor stability of trunk and extremities
- Prevent joint contractures



More protection with positioning pillows

APEX Nano positioning

can be applied along with the mattress for optimal repositioning :

- release muscle tension
- prevent or minimize extremity **spasticity**
- provide protection from any **entrapment** by bed rails





Simple & Intuitive for <u>Caregiver</u>



Protection Upgrade

Seat inflation offering extra support in sacral area during sitting position to prevent from bottoming out



Safer Transport Mode

Transport Mode for non-stop static pressure relief for more than 6 hours during power failure or transport



Heel Relief Function

Single air-cell deflation can float the heels with **zero pressure**

Comfort for Patient



4-way Stretch Top Cover with Low Shear Force

- Antimicrobial
- Low friction and shear
- Vapour permeable, water resistant
- High-flame retardant



The Side Bolsters for Safety

Thorough patient protection by reducing the chance of being trapped or compressed by the bed rails. Compatible with profiling beds



Better Comfort from Rectangular Cells (4th~12th cells)

Offering comfortable pressure relief by evenly redistribute body pressure to the contact surface

Effortless for Maintenance



Quick connector release with detachable base cover

quick connectors on pump and mattress end, respectively allows air cells to be quickly removed from the detachable base cover



				0
No.	Date and Tir	ne	Status	Total Hrs
0039	12/08/ 2017	14:52		1450
0038	05/08/ 2017	10:26	off	1450
0037	03/08/ 2017	20:30		1380
0036	25/07/ 2017		off	1380
0035	19/07/ 2017	15:30		1230

Detailed usage log & regular maintenance reminders

Detailed records of time and total usage hour for technicians to make a quick and accurate decision during service



Base on EPUAP guideline and other studies, repositioning help on patients pressure redistribution and benefit to drainage and skin perfusion while 30 degrees of turning angle provides the upmost comfort. Following are some of the studies.



More studies: clinical support

EPUAP/NPUAP/PPPIA Guideline

Prevention and Treatment of Pressure Ulcer: Clinical Practice Guideline (NPUAP/EPUAP/PPPIA 2014)

Repositioning Individuals in Bed

•Use the 30-degree tilted side lying position (alternately, right side, back, left side) or the prone position if the individual can tolerate this and her/his medical condition allows.

1.1 Encourage individuals who can reposition themselves to sleep in a 30 to 40° side-lying position or flat in bed if not contraindicated.

1.2 Avoid lying postures that increase pressure, such as the 90 side-lying position, or the semi-recumbent position.

•Limit head-of-bed elevation to 30 for an individual on bedrest unless contraindicated by medical condition or feeding and digestive consideration. (Pressure and shear are reduced when the head-of-bed is elevated at less than 30°)





More studies: clinical support_1

Turning patients regularly to the 30° laterally reduces the incidence of pressure ulcers compared with usual care (90° lateral positon) -EPUAP/NPUAP/PPPIA Guideline

The study supports the recommendations of the 2009 <u>International Pressure Ulcer</u> <u>Prevention Guidelines</u>

Pressure Ulcer Incidence

The 90 degree lateral rotation

The 30 degree tilt



Moore Z et al., A randomised controlled clinical trial of repositioning, using the 30 tilt, for the prevention of pressure ulcers. Journal of Clinical Nursing 2011

//PEX

More studies: clinical support_2

Turning patients regularly to the 30° laterally Skin areas (trochanter and sacrum) remain almost free from pressure

Body position O ² tension on sacral skin area	Normal mattress mm Hg ¹	'Super-soft' mattress mm Hg ¹	
Prone position (baseline value)	81.2 ± 6.0	-	
Supine position	12.8±19.6*2,**	42.6±24.1*****.2	
30° laterally inclined position	77.3±6.2***	$74.9 \pm 6.8^{***,3}$	
90° laterally inclined position	78.2±7.2***	75.8±7.1***.3	

Body position	Normal matress	'Super-soft' mattress	
O ² tension on trochanteric skin area	mm Hg ¹	mm Hg ¹	
Prone position (basic value)	85.7 ± 6.3	-	
Supine position	82.8±5.4*	$82.0 \pm 6.4^{*.3}$	
30° laterally inclined position	84.1±5.1*	$80.9\pm5.8^{\textbf{*},3}$	
90° laterally inclined position	8.6±9.2**	31.2±22.3***,****,2	





/PEX

More studies: clinical support_2

Turning patients regularly to the 30° laterally Skin areas (trochanter and sacrum) remain almost free from pressure

> ◆ <u>Pathophysiological Responses</u> 病理變化 1.Sustained cell deformation 持續形變 2.Localized ischemia 缺氧

◆ Pressure Distribution Strategies 壓力分散改善
 1.Decreased interface pressure 降低壓力
 2.Maintenance of capillary circulation 改善血液循環

Peterson MJ et al., Effects of turning on skin-bed interface pressures in healthy adults. Journal of advanced nursing. 2010 Peterson MJ et al., Patient repositioning and pressure ulcer risk—Monitoring interface pressures of at-risk patients, JRRD 2013

/PEX

More studies: clinical support_3

The 30° lateral turning position resulted in the lowest interface pressure measurements



Figure 1: Lateral 30° position

Patient is supported in the back with a cushion:

- Prevent joint contractures The lower two legs, hip and the knee are minimally bent Top arm resting on the pillow
- Pillow under head to maintain the body in line



a bend of 30° of the hip
a bend of 35° of the knee

More studies: clinical support_3



The 30° Lateral Turning Position resulted in the lowest interface pressure measurements

Table 7-7 Achieving Long-Term Positioning in Sidelying		
Positioning Goal	How to Achieve It	
Immediate safety	Clear the airway Means to call for assistance	
Normal spinal alignment	 Patient centered on the bed Pillow under the head to maintain the head in line with the trunk Underside leg straight, top leg flexed 	
 Preventing pressure Side of the head cushioned Trunk rotated slightly forward or backward with support, maintaining good spinal align Underside arm slightly forward to avoid axillary compression Underside hip slightly forward or backward to decrease pressure on the greater trochar Pillow between the knees Pillow between the ankles 		
Preventing edema and contractures	 Upper arm abducted Elbow extended Hand open, resting at or above heart level 	

Marco Romanelli et al., Science and practice of pressure ulcer management. 2006

Johansson C & Chinworth SA, **Mobility in Context: Principles of Patient Care Skills. Chapter 7,** F.A. Davis 2018 20

Specifications

PUMP		
Model Number	9P-085500	
Dimensions (cm)	34.1 x 16.5 x 26.0	
System control	Digital	
Pressure Range	23-80 mmHg	
Cycle time (Alt./min)	10/15/20/25	
Dwell time (min.)	10/20/30/60	
Turning Angle	10-30°	
Alternate mode	● (1-in-2)	
Constant Low Pressure	•	
Max Firm mode	e (20min. Timeout)	
Seat Inflate mode		
Default setting (one touch function)	•	
Low Pressure Alarm	•	
Power Failure Alarm		
Service Alarm		
Alarm Mute		
Panel Lock	(Auto 3min. Untouched /manual)	

Pro-care Turn



Specifications

Pro-care Turn



	Mattress
Dimensions (cm)	200 x 90 x 5"
Top Cover material	4-way stretch PU
Bladder material	Grey Thermoplastic Polyurethane Polymer Ether (TPU Ether)
Base material	PU Stretch
Top Cover fix style	Full 2-way zipper w/ Welded seam
Number of Cells	20
Low-air-loss	additional air tube at 5th~13th cells
Cell Structure	QubiCell (no.4-12 cell)
Heel Relief Cell	(Last 5 cells)
Head Pillow function	• (1~3)
Side bolster	•(10")
Detachable base	
Inflation Time	<30mins
CPR	
CPR Deflation Time	<15 sec.
Quick Connector	(Pump side & Mattress side)
Transport function	(8 hours)
Cable Management	•
Max. Weight Capacity	180kg





1. Whose side does "turning direction" button on the panel from?

Caregiver's left side when he/she standing in front of pump.

2. How to activate one time turning function? What is the purpose behind this function?

Press for 3 seconds to activate one time turning. This function is for those clinicians who must be present when turning a patient.

3. What is the degree for each turning angel?

Low: 10° Medium: 20° High: 30° According to different body shape/distribution, the angle may be slightly different.

4. What is the USB port for?

For dealers to update the latest version of pump firmware.



5. Why Pro-care Turn is not able to provide alternating function during turning process when the holding time (dwell time) is being set at 10 mins?

An integral alternating cycle is 20 minutes, a 10 mins setting can't not complete a whole alternating therapy. However, the turning frequency of 10 minutes dwell time in a hour is enough to prevent from pressure ulcer.

6. How to clean the mattress? Is it easy to disassemble the mattress for cleaning process?

Can be washed with neutral detergent in 95°C water. Detach process:

- 1. Detach the cover,
- 2. Separate the fabric around CPR. Finish the base detachment of head-end
- 3. Remove the CPC quick connecter between pump and mattress. Finish the base detachment of foot-end

7. The noise level of this system?

<30dBA

8. What is pause function all about?

The pause button can be used to urgently treat the patient for the caregiver.



9. How many hours it can hold the air in the mattress when in power failure?

8 hours. Remember to put the connector lid on the mattress end.

10. How many hours it can hold the air in the mattress when doing transport?

Transport mode 8 hours.

11. What will happen if someone plug the quick connector of Pro-care Optima cushion to Pro-care Turn pump?

The pump won't work, alarm will be activated and show error code of misconnection (Er19)



Appendix





Setting Up

Alternate

Continuously and sequentially inflate and deflate air cells (1-in-2 alternating) to avoid long term pressurization of tissue.



Redistributing the body mass over a greater surface area

Seat Inflate

 Increase pressure of whole mattress (+5 mmHg) when patient in a fowler's position for steady support.



Initial Inflation

- Inflate and continuously pressurized to 35mmHg
- Power indicator + Maxfirm indicator. (preset is allowed)
- Maxfirm indicator will off when complete inflation.



Turning Mode

- Top bladders are static during the turning period, and change to alt. mode when reach the target angle & in flat position.

One time turning

- Press of for 3 seconds.

For those clinicians who must be present when turning a patient

Turning Angle

Based on 75Kg w/ 45.7cm

- **10**°
- **20**°
- **30**°

Turning angle is from caregivers' direction and hold at that position for dwell time.

Cycle Time

- 10/15/20/25 min.
- Available @ Alt. mode

Dwell Time

- 10/20/30/60 min. (Cycle time 10mins is w/o Alt.)
- Duration for patient stay at setting turning angle





Pause/Play

- Pause the current motion for 10 min., the LED will flash
- Can change to other modes
- Can press the key again, system will start working at current panel modes

Max Firm

- Better support for patients from sit to stand
- With 20 min. timeout to previous setting



Easy-to-read Error code display, allow service team to quickly response

Recognizable Error code help users (caregivers) can roughly guess the possible issue and might be able to solve some of them, meanwhile the service team can use the error code to quickly find out the issue and determine possible causes soon as well.

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Error Code	LED	說明
Er00	Low pressure alarm	Initial inflation overtime
Er01	Low pressure alarm	Alternating mode A-cells pressure <10mmHg
Er02	Low pressure alarm	Alternating mode B-cells pressure <10mmHg
Er03	Low pressure alarm	Static mode, pressure <10mmHg
Er04	Low pressure alarm	Left turning cell pressure <10mmHg
Er05	Low pressure alarm	Right turning cell pressure <10mmHg
Er06	Low pressure alarm	Head section+ side bolster pressure <10mmHg
Er07	Service alarm	Compressor is out of work
Er08	Service alarm	Alternate A-cell solenoid valve failure or pipeline blockage
Er09	Service alarm	Alternate B-cell solenoid valve failure or pipeline blockage
Er10	Service alarm	Solenoid valve of left turn over failure or pipeline blockage
Er11	Service alarm	Solenoid valve of right turn over failure or pipeline blockage
Er12	Service alarm	Solenoid valve of head section + side bolster failure or pipeline blockage
Er13	Service alarm	Solenoid valve of leakage failure
Er16	NA	Pressure sensor is abnormal
Er17	NA	EEPROM abnormal
Er18	NA	Disconnect with mattress
Er19	NA	Misconnect with mattress
NA	PFA LED	Power Fail

Pressure Mappings & PRI









Fabric specification: top cover

■ Item	9990L6-0000 Stretch Base (Indigo)
Fabric	Polyester/PU, 2-Way Stretch, pantone 648U
Moisture Vapour Permeable	Yes
Water Resistant/ Repellent	Yes
 Biocompatibility 	Pass (Cytotoxicity, Irritation & Skin Sensitization Tests)
REACH & RoHS	Yes
Flame Resistance/ Flammability	BS 7175 Crib 5
 Antimicrobial Activity 	Yes
Washing/ Drying Condition	





Fabric specification: base

■ Item	9990L7-0000 Stretch Base (Cool gray)
Fabric	Polyester/PU, 2-Way Stretch, pantone Cool gray 11U
Moisture <u>Vapour</u> Permeable	Yes
Water Resistant/ Repellent	Yes
 Biocompatibility 	Pass (Cytotoxicity, Irritation & Skin Sensitization Tests)
REACH & RoHS	Yes
Flame Resistance/ Flammability	BS 7175 Crib 5
 Antimicrobial Activity 	Yes
Anti-slip	Yes
Washing/ Drying Condition	





Fabric: stain resistance

9990L6-0000

Test Date : 2019/1/7-21 Materials used: urine (left), blood (right)

Before test



After 10 wash cycles blood urine



Thank you