



# CONTINUUM<sup>®</sup>

negative pressure wound therapy

[www.deroyal.com](http://www.deroyal.com)

 **DeRoyal<sup>®</sup>**  
Improving Care. Improving Business.<sup>®</sup>

# Why DeRoyal® Pro Series?



## 1 **ENGINEERED** Next Generation NPWT

Since 2006, DeRoyal has been providing NPWT accessories, kits and devices to assist in healing hard-to-heal wounds.

## 2 **SCIENTIFIC/CLINICAL** Benefits of VPT® Technology

Variable Pressure Therapy (VPT®) technology is proven to be the most effective form of NPWT providing a simple, comfortable and efficient wound treatment system.<sup>4</sup>

## 3 **CARE + REVENUE** Improving Care While Reducing Cost

The DeRoyal NPWT system and protocols, enabled with Continuum®, ensure optimal outcomes at reduced cost levels.

## 4 **LOCATE & TRACK** GPS & RFID Technology

State of the art tracking systems provides detailed patient reporting, real-time supply chain management, and anytime/anywhere dashboard access to identify negative pressure device location.

## 5 **INCREASED** Continuity of Care

Provide continuity of care with DeRoyal's breadth and depth of product line offerings, software and hardware innovations, and devices that can seamlessly transition from hospital to home.

The **Advanced** NPWT Solution™

# 1 ENGINEERED Next Generation NPWT

## PRO-II®

Portable, Lightweight, Trackable

*Lightweight and discreet, the PRO-II® is portable and comfortable so your ambulatory and homecare patients can get on with their lives.*



### Features

- Contoured design for patient comfort
- Virtually silent operation
- Discreet, disposable canister
- Over 24-hour battery run time
- Carrying case that can be worn on the waist or over the shoulder
- Lower pressure settings enhance comfort during use
- Variable Pressure Therapy (VPT®) technology provides intermittent pressure in the form of a gentle massage effect eliminating painful high-to-low spikes characteristic of traditional intermittent pressure

### Benefits

- Flexible, easy to use settings with Continuous Pressure Technology (CPT) or VPT®
- Contoured design makes pump easy to wear at the waist or over the shoulder
- Reduces pain and discomfort with wear time and dressing changes<sup>2,3</sup>
- Reduces the need for pain medication prior to dressing changes

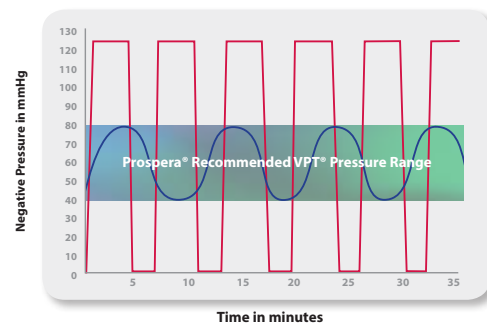
DeRoyal has engineered and manufactured all of our NPWT kits to work across our entire platform of NPWT devices.

# 2 SCIENTIFIC/CLINICAL Benefits of VPT® Technology

Research confirms intermittent negative pressure increases blood to the wound site more effectively than continuous negative pressure, and proliferation of new granulation tissue is significantly higher.<sup>1,2</sup> Until now, pumps available on the market were unable to provide practical, comfortable variable pressure therapy. Prospera® VPT® technology is engineered to deliver comfortable, massaging variable pressure therapy for best results and patient comfort.

- **Customizable time and pressure settings.**
- **Calibrated to increase and decrease in comfortable 5mmHg increments between -40mmHg and -80mmHg, providing a gentle massaging effect.**
- **Virtually eliminates painful high and low pressure spikes.**<sup>2,3,4</sup>
- **Always maintains negative pressure, never dropping to 0mmHg.**

### Variable Pressure Therapy (VPT®)\*



- Intermittent pressure levels of other brands = -125 to 0 mmHg (spike)
- VPT pressure ranges of Prospera® = -80 to -40 mmHg (gradual)

# 3 CARE + REVENUE Improving Care While Reducing Cost

## CONTINUUM OF CARE FOR ALL

Leveraging RFID, GPS and cloud-based software and systems, Continuum® System and Continuum® Mobile System are designed to enable NPWT devices and care to flow seamlessly from Hospital (Part A Medicare Insurance) to Home/LTC/SNF (Part B Medicare Insurance). Continuum's unmatched technology works in tandem with healthcare systems, insurance providers, and standalone components to provide unparalleled levels of automation and precision to the world of NPWT. Our technology enables facilities to increase efficiencies, better manage costs, and establish complete visibility for the facility's supply chain and discharge planning departments.

Use the Continuum® System to increase control of your patient's care, discharge process, supply chain logistics and visibility.

### Features include:

- Automated daily, weekly, and monthly reporting
- 99% accurate usage and charge capture
- Tracks NPWT units throughout the hospital and hospital system – even after discharge!
- Provides ability to submit charges for billing when applicable
- Data-driven supply chain management
- Alerts clinicians of patients returning to hospital for new or additional care
- Real-time inventory knowledge
- Guarantees user accountability via digital chain of custody technology
- Ensures an intelligent, secure inventory location
- Provides visibility into product movement and ownership

## VAULT REPORTING

There is no limit to the information and reporting available via the Continuum® software application. Everything from patient demographics, to number of patients per clinician, to how many kits and what kinds of canisters you have been using—all of this is available via the Continuum® platform. Plus, during the quarterly refreshes and trainings for the NPWT products, DeRoyal can prepare a business review for your supply chain management and logistics teams to assist in leveraging savings and optimizing product assortments and choices.

### Reports include:

- Standard and custom reports for equipment, dressing and accessory utilization
- Units use reports - including dates of service, time on rental, days on patient post release, etc.
- Patient data reports - including types and number of kits, equipment utilization, and clinician applying the dressing—in real time
- Equipment and patient discharge reports
- Custom reporting as needed and requested

Event	Date	User	Resource	Serial Number	Cost	Ordering Person	Patient
User Logged In	4/1/2016 2:26:06 PM	Richie Fennell					
Item In Use	4/1/2016 2:27:37 PM		NPWT Unit NP2000	15967		Jane Doe, RN	Doe, John E.
Item In Use	4/1/2016 2:27:37 PM		NPWT Unit NP3000	95859		Jane Doe, RN	Smithy, Don G.

## IN PRACTICE SAVINGS AND SOLUTIONS

- Reduced discharge time by an estimated 28 minutes per patient due to elimination of paperwork
- Eliminated 90% of “extra” dressing changes due to system allowing use of one unit per patient throughout treatment
- Increased ability to release patients with hard-to-match insurance
- 12 Medicaid patients would have previously stayed in-hospital until the conclusion of NPWT treatment—all were able to be released
- Eliminated extending hospital stays due to “waiting” on units
- 42% of patients released after hours or on non-dressing change days due to unit staying with patient
- Recovered “lost” units (via GPS technology) at a rate of .3 per month; saving the hospital \$36,000 annually
- Continuum® NPWT accurately tracked 2,611 unit rental days on 374 patients over 6 months

	Single Time Cost	Reduction in Monthly Occurrences	Annual Savings in Dollars
<b>Avg. Cost per day for Non-Profit Hospital<sup>5</sup></b>	\$2,289	15	<b>\$412,020</b>
<b>Capital Equipment Loss<sup>6</sup></b>	\$10,000	0.3	<b>\$36,000</b>
<b>Reduction in Rental Days</b>	\$50/day	16.4	<b>\$9,840</b>
<b>Dressing Changes<sup>7</sup></b>	\$119.24	14	<b>\$20,032</b>

	Time Reduction in Minutes	Monthly Occurrences	Monthly Minutes Saved	Annual Savings in Time
<b>Discharge Time</b>	28	16	448 minutes	<b>90 hours</b>
<b>Dressing Change Time</b>	45	14	630 minutes	<b>126 hours</b>
<b>Total Annual Time Savings</b>				<b>216 hours</b>

## 4 LOCATE & TRACK GPS & RFID Technology

Tracking your mobile medical equipment has never been easier.

Designed as a turnkey solution, Continuum® Mobile is a hardware, software, and data solution that allows you to know the location of your mobile medical equipment at all times, saving you time, money, and headaches.

Choose from a variety of smart sensors and monitor critical asset data from your very own enterprise grade web portal. Continuum® Mobile will even send notifications via text or email when alerts are triggered, such as if an enabled device has left the property or if it's traveling more than 5 mph.

- Power: 6 month rechargeable battery at 4 pings/day
- Positioning: Standalone and Assisted GPS; Accurate to 3 meters
- Alerts: Inside or outside geo-fence

### Enterprise-grade Web Portal

- Our user friendly web portal displays detailed location history, alarm history, and critical data such as temperature, motion, run time, battery life, geo-fencing alerts, travel speed, and many other metrics.
- When intergrated with a Continuum® Vault, all data is intergrated into the hospitals system/interface.





# 5

## INCREASED Continuity of Care

### Hospital Geo-fence

Negative Pressure Wound Therapy (NPWT) Prescribed

NPWT Unit retrieved from Continuum® Vault

Healthcare Provider

NPWT administered to patient

DME coverage confirmation received

**DISCHARGE**

Patient Discharged with Continuum® Mobile enabled NPWT Unit





DME restocks patient ready NPWT unit to Continuum® Vault at Hospital

DME retrieves unit for return to inventory



Authorized DME Call Center Notified



Alert sent re: discharge order



Patient concludes therapy

Continuum® Mobile Breaks Geo-fence



Patient receives therapy in place of care (Home, LTAC, SNF, etc.)

# ADVANCING the art and science of NPWT



## APPLICATION VIDEOS

For further instructions on how to apply DeRoyal's dome connector, and other specialty dressings, please visit [www.derooyal.com](http://www.derooyal.com) or subscribe to DeRoyal's YouTube channel.

Below is a sampling of the types of videos that are available via DeRoyal's training program:

- Application of Dressing with Dome Connector
- Application of Foam Dressing with Drain
- Application of Gauze Dressing with Dome Connector
- Continuous Pressure Therapy Mode
- Customizing Sensitivity Levels
- Operating the PRO Series Therapy Units
- Pro-II® Components and Set Up
- Pro-III® Components and Set Up
- Skin Prep
- Specialty Dressing Application - Bridge Dressing
- Specialty Dressing Application - Mushroom Dressing
- Specialty Dressing Application - Offsetting Technique
- Understanding Alarms
- Variable Pressure Therapy Mode



Scan QR Code to view videos

Thank you for the opportunity to present DeRoyal's Negative Pressure Wound Therapy complete solution. We share the same passion for patient comfort, wound healing, and ease-of-use as you do. We are confident that we can provide all the necessary tools for you to administer the best possible care for your patients.



Scan QR Code to view NPWT on [www.derooyal.com](http://www.derooyal.com)

## Additional Resources

1. Borquist, O., Ingemansson, R., Malmjsjo, M. The Influence of Low and High Pressure Levels during Negative Pressure Wound Therapy on Wound Contraction and Fluid Evacuation. *Plastic and Reconstructive Surgery*, February 2011; 127:2: 551-559
2. Eberlein T, Fendler H, Ahearn C. Using a new technique for negative pressure wound therapy (NPWT) for the management of chronic, non-healing wounds. *SAWC* 2008, San Diego
3. Eberlein T, Fendler H. Using a new technique of negative pressure wound therapy (NPWT), Variable Pressure Therapy (VPT) for the management of chronic, non-healing wounds. *JWOCN* May/June 2009;36(35):S23
4. Malmjsjö, M., Gustafsson, L., Lindstedt, S., Gesslein, B., & Ingemansson, R. (2012). The Effects of Variable, Intermittent, and Continuous Negative Pressure Wound Therapy, Using Foam or Gauze, on Wound Contraction, Granulation Tissue Formation, and Ingrowth Into the Wound Filler. *Eplasty*, 12, e5.
5. Rappleye, Emily. (2015) Average cost per inpatient day across 50 states. Accessed 5/10/2017: <http://www.beckershospitalreview.com/finance/average-cost-per-inpatient-day-across-50-states.html>
6. Data provided by the VHA Inc.
7. Kim, J. J., Franczyk, M., Gottlieb, L. J., & Song, D. H. (2017). Cost-effective Alternative for Negative-pressure Wound Therapy. *Plastic and Reconstructive Surgery Global Open*, 5(2), e1211. <http://doi.org/10.1097/GOX.0000000000001211>

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