



**V.A.C.®**  
Therapy

# Negative pressure wound therapy you can trust.

Discover the value of 3M™ V.A.C.® Therapy, now with 3M™ V.A.C. Dermatac™ Drape.



# 3M™ V.A.C.® Therapy: Technology you can trust.

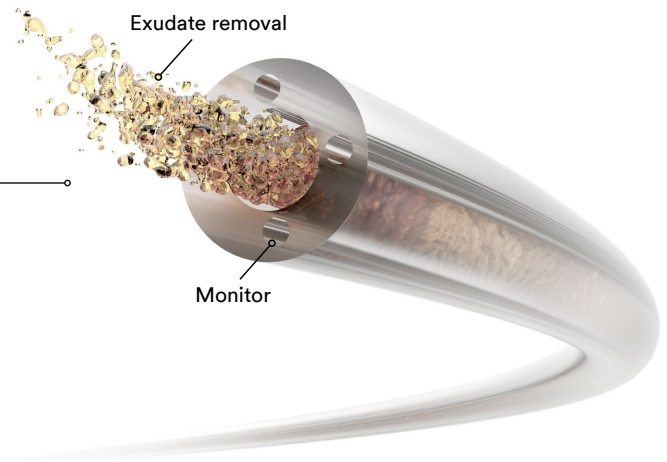
V.A.C.® Therapy is the only negative pressure wound therapy device engineered with 3M™ SensaT.R.A.C.™ Technology, a proprietary technology that maintains and adjusts to deliver set pressure at the wound site. SensaT.R.A.C. Technology helps ensure that the prescribed settings are delivered to the wound.

## V.A.C.® Therapy with SensaT.R.A.C. Technology can:

- Sense pressure changes at the wound site.
- Regulate and maintain pressure as conditions change. (e.g., change in head height, patient position, viscosity of exudate, etc.)
- Detect blockages below the canister site and notify clinicians with alarms when target pressure is not achieved.
- Force air into the system to help reduce blockages. (i.e., 3M™ Easyclear Purge™ Technology)

### 3M™ SensaT.R.A.C.™ Tubing

SensaT.R.A.C. Tubing efficiently draws exudate away from the wound and independently monitors target pressure through multi-lumen tubing.



### 3M™ SensaT.R.A.C.™ Pad

The SensaT.R.A.C. Pad in conjunction with SensaT.R.A.C. Technology, helps maintain pressure.



# 3M™ SensaT.R.A.C.™ Technology in action.

## 3M™ V.A.C.® Therapy vs. Smith & Nephew RENASYS™ TOUCH<sup>1</sup>

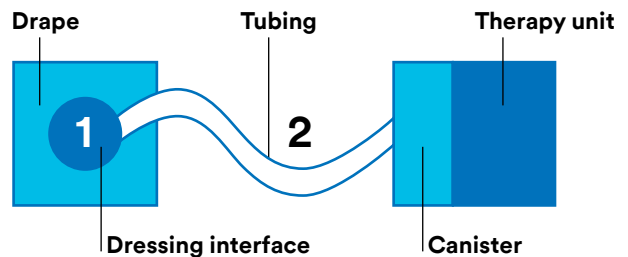
**Background:** Blockage alarms on Negative Pressure Wound Therapy (NPWT) Systems serve to detect and notify caregivers of existing blockages that could prevent the programmed negative pressure from being delivered to the wound site. Of equal importance is how the NPWT system responds to a blockage being present. If the unit does not alarm to notify the caregiver to clear the blockage or does not clear the blockage by introducing air and/or increasing pressure, the wound may not receive the programmed therapy, which can result in poor outcomes. To better understand the capability of NPWT systems at detecting and responding to blockages, 3M initiated a bench study designed to evaluate the parameters.

**Methods:** Multiple NPWT units underwent evaluation:

- 3M™ V.A.C.® Ulta Therapy System, INFOV.A.C.™ Therapy System and 3M™ ActiV.A.C.™ Therapy System.
- Smith and Nephew RENASYS™ TOUCH. The various therapy units and their respective foam based dressing kits were set to default parameters of

-120/-125 mmHg and were evaluated for their ability to trigger blockage alerts or alarms. Blockages\* were intentionally created (1) at the dressing interface (3M™ SensaT.R.A.C.™ Pad or RENASYS™ SOFT PORT connector) or (2) in the tubing/connector between the simulated wound and the canister. The units of each type were tested in triplicate for a total of 9 evaluations.

### Experimental Design Set Up



\*The blockage at site 1 was created by placing a polymeric disc at the simulated wound site directly below the dressing interface (3M™ SensaT.R.A.C.™ Pad or RENASYS™ SOFT PORT connector). The blockage at site 2 was created by controlling airflow into the test set-up using needle valves that were based upon the condition being evaluated, either partially or completely closed.

## 3M™ V.A.C.® Therapy with 3M™ SensaT.R.A.C.™ Technology vs. Smith & Nephew Renasys™ Therapy System

Location and blockage status		Smith & Nephew RENASYS™ TOUCH Therapy Unit				3M™ V.A.C.® Therapy Units			
Description	Visual representation	Blockage alarm incidence	Time(s) to alarm (seconds)	NP @ Dressing (mmHg)	NP @ Canister (mmHg)	Blockage alarm incidence	Time(s) to alarm (seconds)	NP @ Dressing (mmHg)	NP @ Canister (mmHg)
No blockage		0/9	N/A	-124	-125	0/27	N/A	-120 to -126	-120 to -127
Full blockage at the dressing interface		0/9	>600	~0	-121	27/27	88 - 108	-1	-170 to -196
Full blockage of the dressing tubing		9/9	141	-5	-125	27/27	90 - 106	-6 to -7	-202 to -218
Partial blockage of the dressing tubing		0/9	N/A	-87	-125	0/27	N/A	-116 to -126	-134 to -149

### Conclusions

3M™ V.A.C.® Therapy integrated with 3M™ SensaT.R.A.C.™ Technology was shown in bench testing to:

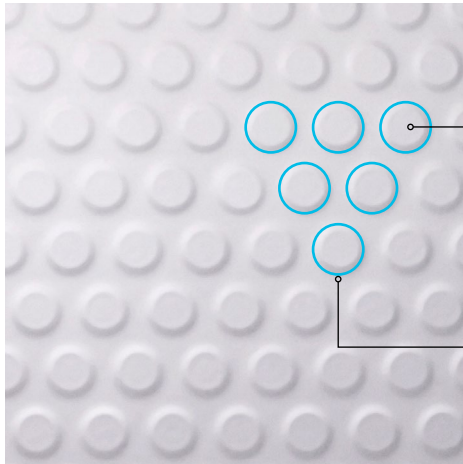
- Demonstrate improved performance in monitoring negative pressure delivery at a simulated wound site and notifying users if blockages exist that could prevent the programmed negative pressure from being delivered to the simulated wound site.
- Attempt to overcome blockages by increasing negative pressure at the canister.

# Introducing 3M™ V.A.C. Dermatac™ Drape.

V.A.C. Dermatac Drape is the first ever silicone-acrylic hybrid drape for use with 3M™ V.A.C.® Therapy.

The V.A.C. Dermatac Drape hybrid composition unites the necessary properties of soft and skin friendly, with strong, stable adhesion to provide the ideal balance for wound healing support.

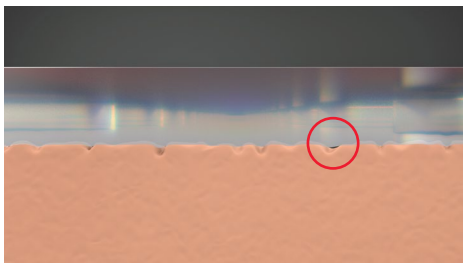
Now you can provide wound healing support for V.A.C.® Therapy patients with the dual benefits of adhesive acrylic and forgiving silicone.



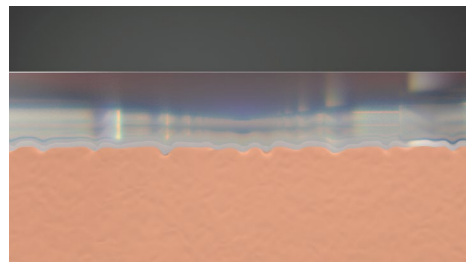
**Acrylic** (inside the circles) helps provide a tight seal to protect wounds on different anatomical locations.

**Silicone** (outside of the circles) allows for repositioning at initial placement and gentle removal.

## Apply with ease.



**Figure 1.** Acrylic is a stiffer adhesive and adhesion builds over time, potentially leaving gaps between drape and skin at initial placement.



**Figure 2.** Silicone is a softer adhesive, rapidly filling gaps at placement.

V.A.C. Dermatac Drape introduces a new class of drape by combining both acrylic and silicone adhesive properties to overcome limitations of traditional adhesive drape technology.

1. High tack-acrylic will cure to patient up to 20 min after placement, allowing repositionability in this timeframe.
2. Silicone allows for greater contact with skin, filling any gaps at placement and potentially reducing leaks.

The precise combination of acrylic and silicone allows for an ideal balance for wound healing support, leading to significant benefits related to:

- Sealing and repositionability upon initial placement.
- Less time at dressing changes, improved ease of use, and less waste.
- Kind to patients' skin and minimizes discomfort.

### Seal in the heal.

With 3M™ V.A.C. Dermatac™ Drape you can rely on a strong and effective seal for negative pressure wound therapy.

In a simulated wound model (n=5), V.A.C. Dermatac Drape with 3M™ V.A.C.® Therapy maintained a seal in 100% (5/5) of samples vs. Mölnlycke's Avance® Film with Safetac® technology which failed to maintain a seal in 80% (4/5) of samples<sup>2</sup>.

	3M™ V.A.C. Dermatac™ Drape	Other Silicone-based Drape
Seal maintained in a simulated wound model (n=5) <sup>2</sup>	100%	20%

### Remove with kindness.

With its low tack adhesive properties V.A.C. Dermatac Drape is strong enough to maintain a seal for V.A.C.® Therapy, yet gentle enough to help take the pain out of dressing changes.

Patients (n=5) observed that V.A.C.® Therapy with V.A.C. Dermatac Drape was more comfortable both when worn and during dressing changes compared to standard drape<sup>3</sup>.

### Impact of adhesive properties on skin at drape removal.

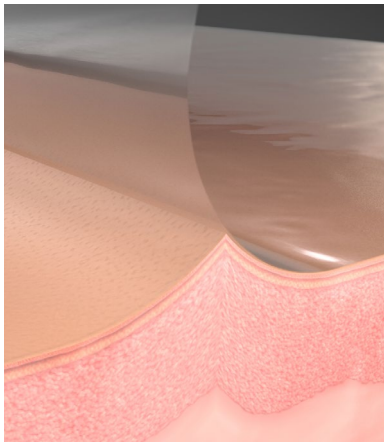


Figure 3. Traditional Acrylic Drape

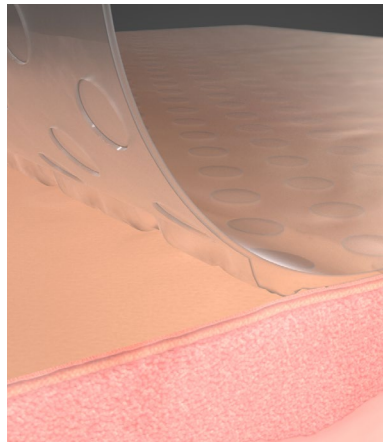


Figure 4. 3M™ V.A.C. Dermatac™ Drape

The full periwound skin contact provided by traditional high-tack acrylic drapes (shown in **Figure 3.**) can deform skin upon removal.

V.A.C. Dermatac Drape has less acrylic contact with periwound skin due to its perforated silicone layer allowing the softer, more flowable silicone to deform at removal instead of the patient's skin.

100% (n=17) of patients agreed that V.A.C. Dermatac Drape was painless upon removal<sup>4</sup>

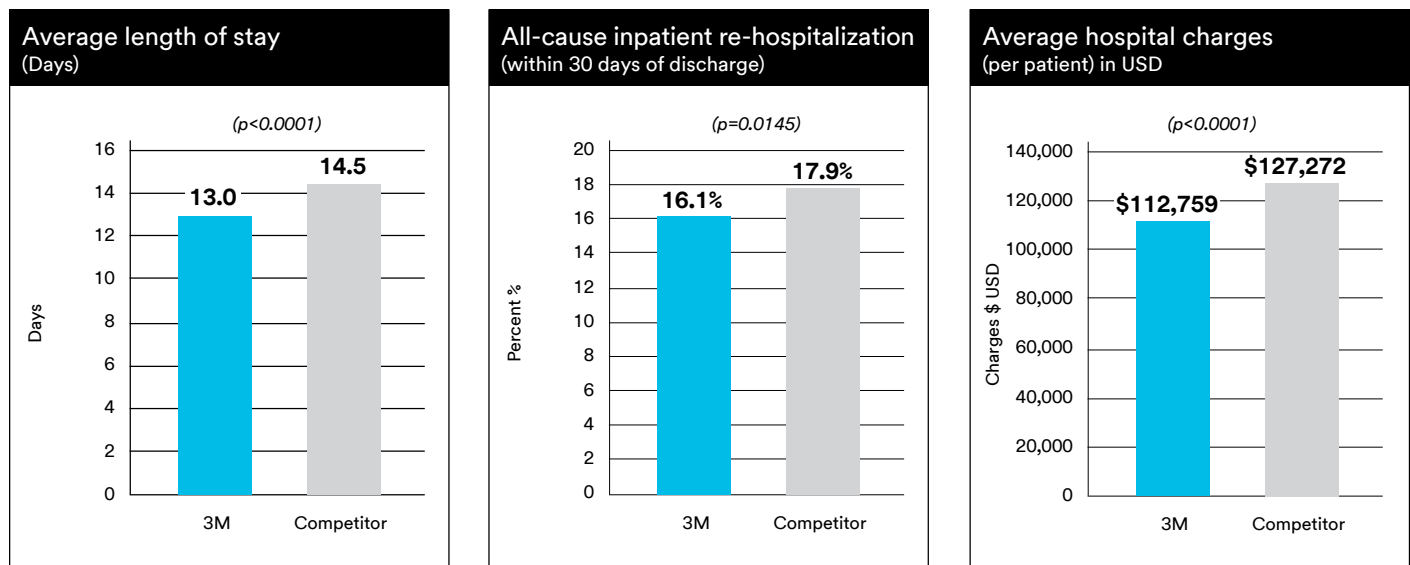
- V.A.C. Dermatac Drape was placed on 17 patients over a 2-week period, with dressing changes every 48 to 72 hours.
- At dressing changes patients were asked how V.A.C. Dermatac Drape felt upon removal.

# Failure to heal a wound effectively can lead to higher overall cost of care.

## Cost savings in the acute setting.

A retrospective observational database study of 21,638 patients (3M n=18,385, Competitor n=3,253) was conducted by Premier Research Services (PRS) to evaluate the costs and readmission rates of Negative Pressure Wound Therapy (NPWT) patients\* at facilities using 3M NPWT vs. Competitor NPWT Therapies.<sup>5</sup>

## Analysis of 3M NPWT vs. Competitor NPWT



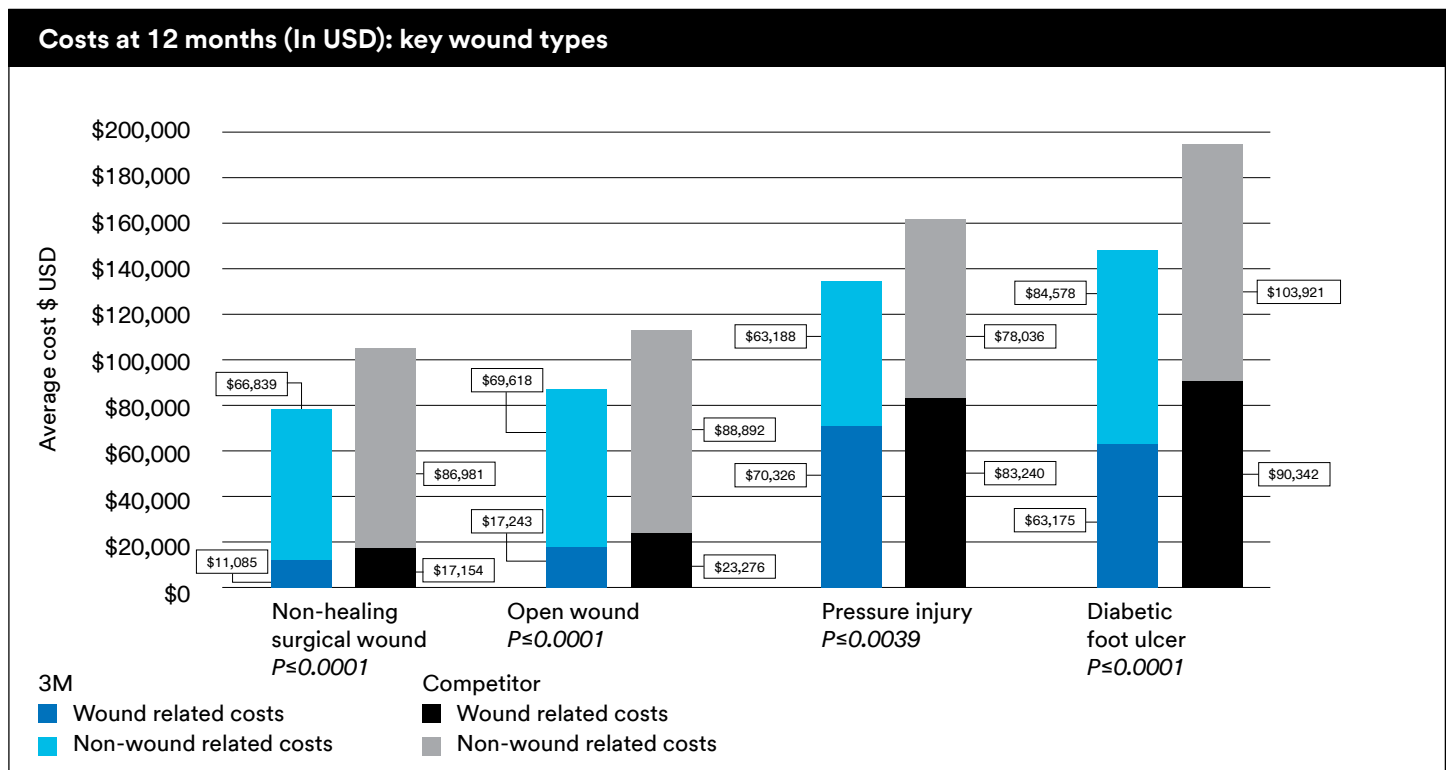
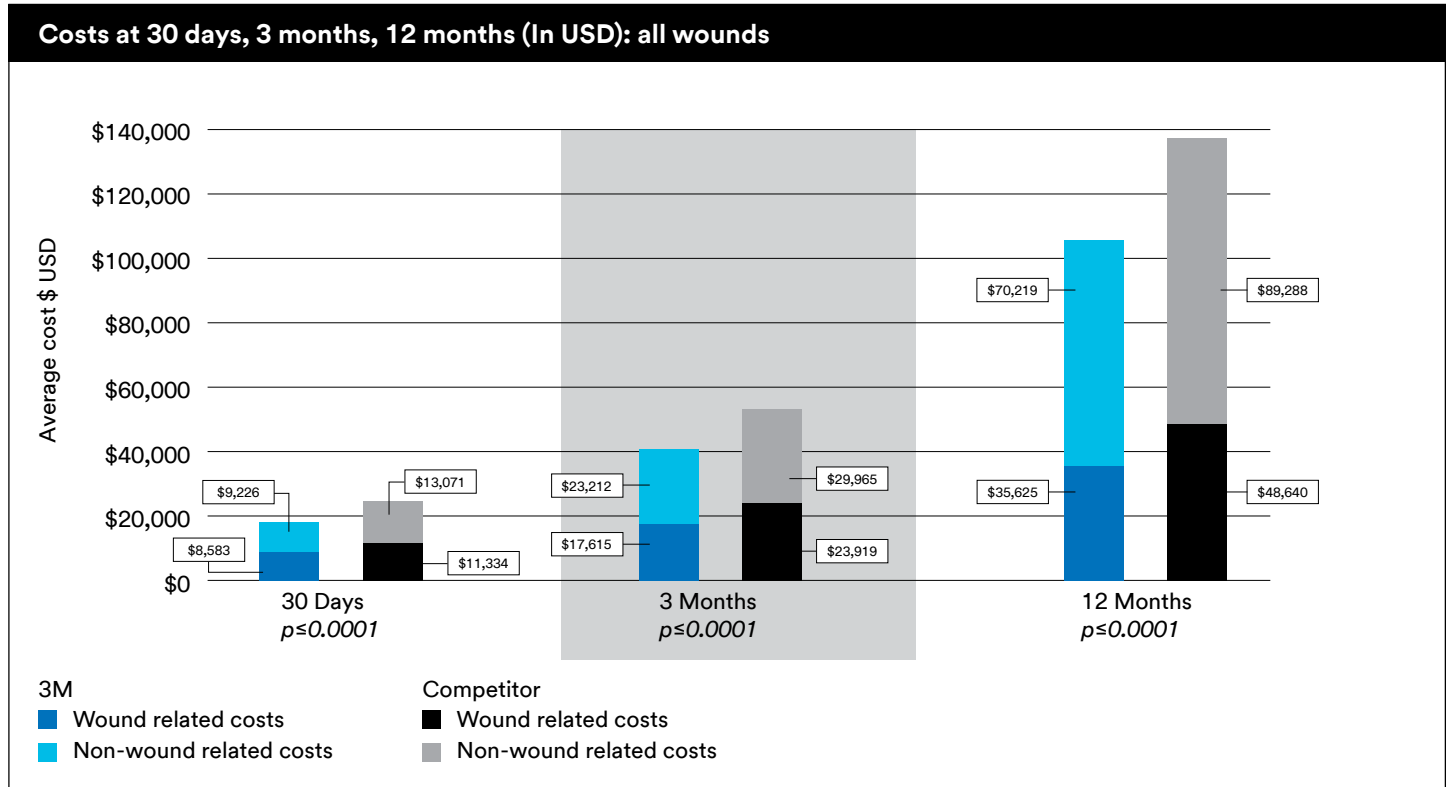
\*Each patient received at least 1 charge for NPWT. Competitor hospitals include all Non-3M NPWT hospitals.

## Total Cost of Care

- Total cost to treat (in addition to wound closure) is important for evaluating cost effectiveness of wound care products and services.
- Failure to heal a wound effectively can lead to overall higher costs to treat.
- In addition to randomized control trials and clinical papers, analysis of real world expenditure data can provide insights into cost effectiveness of wound care therapies.

**Cost savings in the out-of-hospital setting.**

Retrospective analysis of U.S. insurance claims database compared total and wound-related costs for 15,180 patients who received 3M™ V.A.C.® Therapy versus competitor NPWT in the outpatient setting between January 2016 and September 2018. Costs were compared across care settings and wound types at 30 days, 3 months, and 12 months after initial claim.<sup>6</sup>



- 3M™ V.A.C.® Therapy patients had lower total and wound related costs across all time periods and across all wound types at 12 months.
- V.A.C.® Therapy patients experienced shorter average length of therapy and were less likely to be switched to another supplier.

# A world leader in skin and wound care right by your side.

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## Science-based solutions

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### References:

1. Kilpadi, D. et al. Incidence of blockage alarms when dressing connector orifices are blocked: comparison of negative pressure wound therapy systems. Poster presented at: Symposium on Advanced Wound Care (SAWC); October 20-22, 2017, Las Vegas, NV. 2. KCI. Evaluation of Seal Performance for KCI DERMATACTM Drape and Mölnlycke Avance Safetac Drape on Simulated Wound Model. Nov 20, 2018. 3. Napolitano, R. Early Use of a Novel Acrylic-Silicone Hybrid Drape With Negative Pressure Wound Therapy in Lower Extremity Wounds. SAWC Fall, Las Vegas NV. October 2019. 4. Galarza, L. Initial clinical observations using a novel negative pressure wound therapy drape comprised of acrylic and silicone. Poster Presented at the SAWC Spring Meeting, San Antonio, TX. May 2019. 5. Law, A., Beach, K. Hospital stay costs associated with negative pressure wound therapy. Poster Presented at: Symposium on Advanced Wound Care(SAWC);October 16-18, 2014, Las Vegas, NV. 47(5):547-51. 6. Law A L. Krebs B. Karnik B. Griffin L. Comparison of Healthcare Costs Associated With Patients Receiving Traditional Negative Pressure Wound Therapies in the Post Acute Setting. Cureus 12(11):e11790. DOI 10.7759/cureus.11790.

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