

# Second Heart Assist Granted U.S. Patent for Core Circulatory Support Platform

*Patent strengthens IP foundation supporting a minimally invasive platform designed to expand access to circulatory support across a broader patient population*

SALT LAKE CITY, CA, UNITED STATES, February 10, 2026 /EINPresswire.com/ -- Second Heart

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This patent reinforces our commitment to doing the hard, unglamorous work of making circulatory support simpler, more scalable, and more available to the patients who need it most.”

*Jeff Donofrio, CEO- Second Heart Assist*

Assist, Inc., a clinical-stage cardiovascular company developing next-generation circulatory support technologies, today announced that the United States Patent and Trademark Office has granted U.S. Patent No. US12491356B2, effective December 9, 2025, covering the company's core circulatory assist pump architecture and deployment platform.

The granted patent protects a minimally invasive circulatory support system utilizing one or more catheter-delivered pumps positioned within the aorta using a stent-based architecture. The platform is designed to support

both temporary and longer-duration applications and serves as the foundation for the company's broader development roadmap, including future wireless-powered chronic support concepts.

“This patent represents a meaningful milestone for Second Heart Assist,” said Jeff Donofrio, Chief Executive Officer. “It reinforces the defensibility of our platform at a time when we are transitioning from development into early U.S. clinical evaluation. More importantly, it reflects our long-term commitment to building a scalable technology designed to reach patients who have historically lacked access to advanced circulatory support.”

## A Platform Designed to Expand Access

Despite advances in mechanical circulatory support, a large population of patients with acute decompensated heart failure and related conditions never receive device-based therapy. Adoption has been constrained by procedural complexity, infrastructure requirements, and reliance on highly specialized centers.

Second Heart Assist's platform is designed to address these limitations through a fully percutaneous, catheter-based approach that aligns with existing interventional cardiology workflows. By prioritizing simplicity of placement, system integration, and flexibility across care settings, the company aims to enable broader use of circulatory support beyond tier-one

academic hospitals.

### Technology Platform Overview

The patented system supports a circulatory assist platform featuring:

- A low-profile, stent-based pump architecture deployable via catheter
- One or more miniature impellers designed to provide adjustable circulatory support
- Design elements intended to preserve native aortic pulsatility while stabilizing the device
- A scalable foundation capable of supporting both temporary applications and future wireless-powered configurations

The system is currently in clinical development and has not been approved for commercial use.

### Prior Clinical Experience (Outside the United States)

Outside the United States, earlier versions of the Second Heart Assist system have been used in 29 patients under investigational settings, including cases in Canada, Panama, and Paraguay.

Clinical experience includes use during high-risk percutaneous coronary intervention and in patients with cardio-renal syndrome.

Across these cases, the company reports:

- No device-related adverse effects
- Average patient discharge is approximately 48 hours following intervention
- No patient re-admissions reported during follow-up extending up to as much as 14 months.

These experiences were conducted outside the U.S. and are not predictive of future outcomes, but they have informed device refinement, procedural workflows, and regulatory planning. The company's wireless-powered chronic support system has not yet been evaluated in clinical studies.

### Upcoming Clinical Milestones

Second Heart Assist expects to initiate its Early Feasibility Study (EFS) this quarter in collaboration with approximately six leading U.S. cardiovascular centers recognized for their expertise in advanced heart failure and circulatory support. The study is intended to generate early clinical insights while supporting subsequent regulatory and development milestones.

### Strategic and Commercial Significance

From an investor and strategic perspective, the patent reinforces Second Heart Assist's position as a platform company. Protecting core system architecture rather than isolated features supports long-term optionality, future indication expansion, and potential strategic partnerships as the company advances clinically.

Platform-level intellectual property is a critical driver of durable value creation in medical technology, particularly as healthcare systems seek solutions that balance clinical impact with scalability, usability, and access.

The patented technology was developed through the work of Howard J. Leonhardt during his tenure with Second Heart Assist, contributing to the foundational concepts underlying the company's platform.

"In this space, good ideas are not rare", Donofrio added. "Systems that work in the real world are. We are building around the realities clinicians face every day, not idealized use cases. This patent reinforces our commitment to doing the hard, unglamorous work of making circulatory support simpler, more scalable, and more available to the patients who need it most." The technologies referenced have not been approved for commercial sale by the U.S. Food and Drug Administration.

#### About Second Heart Assist

Second Heart Assist, Inc. is a clinical-stage medical device company developing minimally invasive circulatory support technologies designed to expand access to advanced heart failure therapy through platform-based innovation and patient-centered system design.

#### Forward-Looking Statements

This press release contains forward-looking statements that involve risks and uncertainties. Actual results may differ materially. The technologies described are investigational and are not approved for commercial use.

Jeff Donofrio

Second Heart Assist, Inc.

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