

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
 WASHINGTON, D.C. 20549

FORM S-8
REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

SUNSHINE HEART, INC.

(Exact name of Registrant as specified in its charter)

Delaware
 (State or other jurisdiction of
 incorporation or organization)

12988 Valley View Road
Eden Prairie, Minnesota
 (Address of principal executive offices)

68-0533453
 (I.R.S. Employer Identification Number.)

55344
 (Zip code)

Sunshine Heart, Inc. Second Amended and Restated 2011 Equity Incentive Plan
Sunshine Heart, Inc. 2013 Non-Employee Directors' Equity Incentive Plan
Sunshine Heart, Inc. New-Hire Equity Incentive Plan
 (Full title of the plan)

David A. Rosa
Chief Executive Officer
Sunshine Heart, Inc.
12988 Valley View Road
Eden Prairie, MN 55344
(952) 345-4200
 (Name, address, including zip code, and telephone number,
 including area code, of agent for service)

Copy to:

Phillip D. Torrence, Esq.
 Honigman Miller Schwartz and Cohn LLP
 350 East Michigan Avenue, Suite 300
 Kalamazoo, MI 49007
 (269) 337-7702

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act. (Check One):

Large accelerated filer Accelerated filer
 Non-accelerated filer (Do not check if a smaller reporting company) Smaller reporting company

CALCULATION OF REGISTRATION FEE

Title of securities to be registered	Amount to be registered(1)	Proposed maximum offering price per share(2)	Proposed maximum aggregate offering price(2)	Amount of registration fee
Common Stock, par value \$0.0001 per share	1,196,643	\$ 6.275	\$ 7,508,934.83	\$ 967.15
(1) Pursuant to Rule 416(a) under the Securities Act of 1933, as amended (the " Securities Act "), this Registration Statement shall also cover any additional shares of the Registrant's common stock (" Common Stock ") that become issuable under the Plans (as defined below) by reason of any stock dividend, stock split, recapitalization or any other similar transaction without receipt of consideration that results in an increase in the number of shares of the Registrant's outstanding Common Stock.				
(2) Estimated solely for the purpose of calculating the registration fee pursuant to paragraphs (c) and (h) of Rule 457 under the Securities Act. The offering price per share and aggregate offering price are based upon the average of the high and low prices of the Common Stock as reported on the NASDAQ Capital Market on March 14, 2014, a date within five business days prior to the date of filing of this registration statement, for: (i) shares reserved for future grant pursuant to the Registrant's Second Amended and Restated 2011 Equity Incentive Plan (the " 2011 EIP "); (ii) shares reserved for future grant pursuant to the Registrant's 2013 Non-Employee Directors' Equity Incentive Plan (the " Directors' EIP "); and (iii) shares reserved for future grant pursuant to the Registrant's New-Hire Equity Incentive Plan (the " New-Hire Plan "); and collectively, with the 2011 EIP and the Directors' EIP, the " Plans ").				
Securities	Number of Shares	Offering Price Per Share	Aggregate Offering Price	
Shares reserved for future grant under the 2011 EIP	806,654(3)	\$ 6.275	\$ 5,061,753.85	
Shares reserved for future grant under the Directors' EIP	108,982(4)	\$ 6.275	\$ 683,862.05	
Shares reserved for future grant under the New-Hire Plan	281,007(5)	\$ 6.275	\$ 1,763,318.93	
Proposed Maximum Offering Price			\$ 7,508,934.83	

- (3) The 806,654 shares consist of (i) 747,738 shares that were automatically added to the shares authorized for issuance under the 2011 EIP on January 1, 2014 pursuant to an "evergreen" provision contained in the 2011 EIP and (ii) 58,916 shares returned to the 2011 EIP share reserve as a result of shares being partially withheld by the Registrant to cover tax withholding obligations at the time of Common Stock grants or vesting of restricted stock unit grants, in accordance with the provisions of the 2011 EIP. Pursuant to the 2011 EIP, for a period of five (5) years commencing on January 1, 2013 and ending on (and including) January 1, 2017, the aggregate number of shares of Common Stock that may be issued pursuant to stock awards will automatically adjust on each January 1 so that it will equal (i) thirteen percent (13%) of the fully diluted shares as of the immediately preceding December 31, reduced by (ii) the number of shares of Common Stock issuable upon exercise of outstanding options under the Sunshine Heart, Inc. Amended and Restated 2002 Stock Plan.
- (4) The 108,982 shares consist of 108,982 shares that were automatically added to the shares authorized for issuance under the Directors' EIP on January 1, 2014 pursuant to an "evergreen" provision contained in the Directors' EIP. Pursuant to the Directors' EIP, the share reserve under the Directors' EIP will automatically increase on January 1st of each year, for a period of not more than ten years, commencing on January 1, 2014 and ending on (and including) January 1, 2023, to an amount equal to two percent (2%) of the fully diluted shares outstanding on December 31st of the preceding calendar year; provided that the Board of Directors may act prior to January 1st of a given year to provide that there will be no January 1st increase in the share reserve for such year or that the increase in the share reserve for such year will be a lesser number of shares than would otherwise occur.
- (5) The 281,007 shares consist of 281,007 shares reserved for future grant under the New-Hire Plan pursuant to a First Amendment to the New-Hire Plan that was approved by the Registrant's Compensation Committee, pursuant to delegated authority, on October 21, 2013.

EXPLANATORY NOTE

This Registration Statement on Form S-8 is being filed for the purpose of registering an additional (i) 806,654 shares reserved for future grant pursuant to the Registrant's Second Amended and Restated 2011 Equity Incentive Plan, (ii) 108,982 shares reserved for future grant pursuant to the Registrant's 2013 Non-Employee Directors' Equity Incentive Plan and (iii) 281,007 shares reserved for future grant pursuant to the Registrant's New-Hire Equity Incentive Plan.

**INCORPORATION BY REFERENCE OF CONTENTS OF
REGISTRATION STATEMENTS ON FORM S-8**

The contents of the Registration Statements on Form S-8 previously filed with the Securities and Exchange Commission (the "**Commission**") on September 14, 2012 (File No. 333-183925), May 30, 2013 (File No. 333-188935) and August 9, 2013 (File No. 333-190499) are incorporated by reference herein.

PART II

INFORMATION REQUIRED IN THE REGISTRATION STATEMENT

Item 3. Incorporation of Documents By Reference.

The following documents filed with the Commission by the Registrant are hereby incorporated by reference in this Registration Statement:

- (a) The Registrant's Annual Report on Form 10-K for the year ended December 31, 2013, filed with the Commission on March 14, 2014;
- (b) The information specifically incorporated by reference into our Annual Report on Form 10-K for the year ended December 31, 2013 from our definitive Proxy Statement for the Annual Meeting of Stockholders to be held on May 29, 2014, to be filed with the Commission within 120 days after the end of the fiscal year covered by the Annual Report on Form 10-K for the year ended December 31, 2013;
- (c) The description of the Registrant's Common Stock contained in the Registration Statement on Form 10 (Registration No. 001-35312) filed pursuant to Section 12(b) on September 30, 2011 and all amendments thereto; and
- (d) The description of the Registrant's Series A Junior Participating Preferred Stock, par value \$0.0001 per share, in the Registration Statement on Form 8-A (Registration No. 001-35312) filed with the Commission on June 14, 2013.

In addition, all documents the Registrant subsequently files pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act after the filing of this Registration Statement and prior to the filing of a post-effective amendment which indicates that all securities offered hereby have been sold or which deregisters all securities covered hereby then remaining unsold are incorporated by reference in this Registration Statement and are a part hereof from the date of filing of such documents.

Any statement contained in a document incorporated or deemed to be incorporated by reference herein shall be deemed to be modified or superseded for purposes of this Registration Statement to the extent that a statement contained herein, or in any subsequently filed document, which also is or is deemed to be incorporated by reference herein, modifies or supersedes such prior statement. Any such statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute part of this Registration Statement.

Item 8. Exhibits.

The Exhibit Index attached to this Registration Statement is incorporated herein by reference.

1

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the Registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-8 and has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Eden Prairie, State of Minnesota, on March 18, 2014.

SUNSHINE HEART, INC.

By: /s/ JEFFREY S. MATHIESEN
Name: Jeffrey S. Mathiesen
Title: Chief Financial Officer

We, the undersigned officers and directors of Sunshine Heart, Inc., hereby constitute David A. Rosa and Jeffrey S. Mathiesen, as the true and lawful attorneys with full power to them, and each of them singly to sign for us and in our names, in the capacities indicated below the Registration Statement filed herewith and any amendments to said Registration Statement, and generally to do all such things in our name and behalf in our capacities as officers and directors to enable Sunshine Heart, Inc. to comply with the provisions of the Securities Act of 1933 and all requirements of the Securities and Exchange Commission, hereby ratifying and confirming our signatures as they may be signed by our said attorneys, or any of them, to said Registration Statement and any and all amendments thereto. Pursuant to the requirements of the Securities Act of 1933, this Registration Statement has been signed by the following persons in the capacities and on the dates indicated.

<u>SIGNATURE</u>	<u>TITLE</u>	<u>DATE</u>
<u>/s/ DAVID A. ROSA</u> David A. Rosa	President, Chief Executive Officer (Principal Executive Officer) and Director	March 18, 2014
<u>/s/ JEFFREY S. MATHIESEN</u> Jeffrey S. Mathiesen	Chief Financial Officer (Principal Financial and Accounting Officer)	March 18, 2014
<u>/s/ PAUL R. BUCKMAN</u> Paul R. Buckman	Director	March 18, 2014

<u>/s/ GEOFFREY E. BROOKE</u> Geoffrey E. Brooke	Director	March 18, 2014
<u>/s/ GREGORY D. WALLER</u> Gregory D. Waller	Director	March 18, 2014
<u>/s/ JOHN L. ERB</u> John L. Erb	Director	March 18, 2014
<u>/s/ WARREN S. WATSON</u> Warren S. Watson	Director	March 18, 2014
<u>/s/ JON W. SALVESON</u> Jon W. Salvesson	Director	March 18, 2014

2

EXHIBIT INDEX

Exhibit Number	Exhibit Description	Incorporated By Reference			Exhibit Number	Filed Herewith
		Form	File Number	Date of First Filing		
4.1	Certificate of Incorporation, as amended.	10	001-35312	February 1, 2012	3.1	
4.2	Form of Certificate of Designations of Series A Junior Participating Preferred Stock of Sunshine Heart, Inc.	8-K	001-35312	June 14, 2013	3.1	
4.3	Amended and Restated Bylaws.	10	001-35312	September 30, 2011	3.2	
4.4	Rights Agreement dated June 14, 2013 by and between Sunshine Heart, Inc. and American Stock Transfer & Trust Company, LLC, as Rights Agent.	8-K	001-35312	June 14, 2013	4.1	
5.1	Opinion of Honigman Miller Schwartz Cohn LLP.					X
23.1	Consent of Ernst & Young LLP.					X
23.2	Consent of Honigman Miller Schwartz and Cohn LLP (included in its opinion filed as Exhibit 5.1 to this Registration Statement).					X
24.1	Power of Attorney (included with signatures).					X
99.1	Sunshine Heart, Inc. Amended and Restated 2011 Equity Incentive Plan.	14A	001-35312	July 27, 2012	App. A	
99.2	Form of Stock Option Grant Notice and Option Agreement for 2011 Equity Incentive Plan.	10	001-35312	September 30, 2011	10.5	
99.3	Form of Senior Management Stock Option Grant Notice and Option Agreement for 2011 Equity Incentive Plan.	10	001-35312	September 30, 2011	10.6	
99.4	Form of Stock Option Grant Notice and Form of Option Agreement (Director) for 2011 Equity Incentive Plan.	8-K	001-35312	September 18, 2012	10.1	
99.5	Form of Stock Grant Notice and Stock Award Agreement for 2011 Equity Incentive Plan.	8-K	001-35312	September 10, 2013	10.1	
99.6	Form of Restricted Stock Unit Award Grant Notice and Restricted Stock Unit Award Agreement for 2011 Equity Incentive Plan.	8-K	001-35312	September 10, 2013	10.2	
99.7	Sunshine Heart, Inc. 2013 Non-Employee Directors' Equity Incentive Plan.	14A	001-35312	April 5, 2013	App. A	

3

Exhibit	Exhibit Description	Incorporated By Reference			Exhibit	Filed
		Form	File	Date of First		

<u>Number</u>			<u>Number</u>	<u>Filing</u>	<u>Number</u>	<u>Herewith</u>
99.8	Form of Stock Option Agreement under the Sunshine Heart, Inc. 2013 Non-Employee Directors' Equity Incentive Plan.	8-K	001-35312	May 29, 2013	10.2	
99.9	Sunshine Heart, Inc. New-Hire Equity Incentive Plan.	10-Q	001-35312	August 8, 2013	10.1	
99.10	First Amendment to the Sunshine Heart, Inc. New-Hire Equity Incentive Plan.	10-Q	001-35312	November 12, 2013	10.1	
99.11	Form of Stock Option Grant Notice and Option Agreement for the Sunshine Heart, Inc. New-Hire Equity Incentive Plan.	10-Q	001-35312	November 12, 2013	10.2	

HONIGMAN

Honigman Miller Schwartz and Cohn LLP
Attorneys and Counselors

(313) 465-7000
Fax: (313) 465-8000
www.honigman.com

March 18, 2014

Sunshine Heart, Inc.
12988 Valley View Road
Eden Prairie, MN 55344

RE: Registration Statement on Form S-8

Ladies and Gentlemen:

We have acted as counsel to Sunshine Heart, Inc., a Delaware corporation (the "**Company**"), in connection with the preparation and filing of a Registration Statement on Form S-8 (the "**Registration Statement**") with the Securities and Exchange Commission (the "**Commission**") for the registration under the Securities Act of 1933, as amended (the "**Securities Act**"), of up to 1,196,643 shares of the Company's Common Stock, \$0.0001 par value per share (the "**Shares**"), to be issued pursuant to awards under the Company's Second Amended and Restated 2011 Equity Incentive Plan, 2013 Non-Employee Directors' Equity Incentive Plan and New-Hire Equity Incentive Plan (collectively, the "**Plans**").

Based on our examination of such documents and other matters as we deem relevant, we are of the opinion that the Shares, when offered, sold and issued by the Company in accordance with the applicable Plans and the awards thereunder, the Registration Statement and the related Prospectuses, will be validly issued, fully paid and nonassessable.

We consent to the filing of this opinion as an exhibit to the Registration Statement. In giving such consent, we do not hereby admit that we come within the category of persons whose consent is required under Section 7 of the Securities Act or the rules and regulations of the Commission under the Securities Act.

Very truly yours,

/S/ HONIGMAN MILLER SCHWARTZ AND COHN LLP

350 East Michigan Avenue · Suite 300 · Kalamazoo, Michigan 49007-3800
Detroit · Lansing · Oakland County · Ann Arbor · Kalamazoo

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in this Registration Statement on Form S-8 pertaining to the Sunshine Heart, Inc. Second Amended and Restated 2011 Equity Incentive Plan, Sunshine Heart, Inc. 2013 Non-Employee Directors' Equity Incentive Plan, and Sunshine Heart, Inc. New-Hire Equity Incentive Plan, with respect to the consolidated financial statements of Sunshine Heart, Inc. and subsidiaries included in its Annual Report (Form 10-K) for the year ended December 31, 2013 filed with the Securities and Exchange Commission.

/S/ ERNST & YOUNG LLP

Minneapolis, Minnesota

March 18, 2014
