

Doughty Brian
Form 4
February 11, 2011

FORM 4

**UNITED STATES SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549**

OMB APPROVAL

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Check this box if no longer subject to Section 16. Form 4 or Form 5 obligations may continue. See Instruction 1(b).

STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP OF SECURITIES

Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934, Section 17(a) of the Public Utility Holding Company Act of 1935 or Section 30(h) of the Investment Company Act of 1940

(Print or Type Responses)

1. Name and Address of Reporting Person *
Doughty Brian

(Last) (First) (Middle)
651 CAMPUS DRIVE
(Street)

ST. PAUL, MN 55112

(City) (State) (Zip)

2. Issuer Name and Ticker or Trading Symbol
Cardiovascular Systems Inc [CSII]

3. Date of Earliest Transaction
(Month/Day/Year)
02/09/2011

4. If Amendment, Date Original Filed(Month/Day/Year)

5. Relationship of Reporting Person(s) to Issuer

(Check all applicable)

___ Director ___ 10% Owner
 Officer (give title below) ___ Other (specify below)
VP of Commerical Operations

6. Individual or Joint/Group Filing(Check Applicable Line)
 Form filed by One Reporting Person
___ Form filed by More than One Reporting Person

Table I - Non-Derivative Securities Acquired, Disposed of, or Beneficially Owned

| 1. Title of Security (Instr. 3) | 2. Transaction Date (Month/Day/Year) | 2A. Deemed Execution Date, if any (Month/Day/Year) | 3. Transaction Code (Instr. 8) | 4. Securities Acquired (A) or Disposed of (D) (Instr. 3, 4 and 5) | 5. Amount of Securities Beneficially Owned Following Reported Transaction(s) (Instr. 3 and 4) | 6. Ownership Form: Direct (D) or Indirect (I) (Instr. 4) | 7. Nature of Ownership (Instr. 4) |
|---------------------------------|--------------------------------------|--|--------------------------------|---|---|--|-----------------------------------|
| | | | Code | V | Amount or Price | | |
| Common Stock | 02/09/2011 | | M | | 16,175 A \$ 7.9 | 80,440 | D |
| Common Stock | 02/09/2011 | | M | | 6,470 A \$ 7.9 | 86,910 | D |
| Common Stock | 02/09/2011 | | M | | 3,882 A \$ 8.75 | 90,792 | D |
| Common Stock | 02/09/2011 | | S | | 29,697 D \$ 10.322 | 61,095 | D |
| | | | | | (1) | | |

Reminder: Report on a separate line for each class of securities beneficially owned directly or indirectly.

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(9-02)

Table II - Derivative Securities Acquired, Disposed of, or Beneficially Owned
(e.g., puts, calls, warrants, options, convertible securities)

| 1. Title of Derivative Security (Instr. 3) | 2. Conversion or Exercise Price of Derivative Security | 3. Transaction Date (Month/Day/Year) | 3A. Deemed Execution Date, if any (Month/Day/Year) | 4. Transaction Code (Instr. 8) | 5. Number of Derivative Securities Acquired (A) or Disposed of (D) (Instr. 3, 4, and 5) | 6. Date Exercisable and Expiration Date (Month/Day/Year) | 7. Title and Amount of Underlying Securities (Instr. 3 and 4) | 8. Amount or Number of Shares |
|--|--|--------------------------------------|--|--------------------------------|---|--|---|-------------------------------|
| Stock Option (right to buy) | \$ 8.83 | | | | | (2) 12/18/2016 | Common Stock | 45,290 |
| Stock Option (right to buy) | \$ 8.83 | | | | | (2) 04/17/2017 | Common Stock | 3,235 |
| Stock Option (right to buy) | \$ 7.9 | 02/09/2011 | | M | 16,175 | (2) 06/11/2017 | Common Stock | 16,175 |
| Stock Option (right to buy) | \$ 7.9 | 02/09/2011 | | M | 6,470 | (2) 08/06/2017 | Common Stock | 6,470 |
| Stock Option (right to buy) | \$ 12.15 | | | | | (3) 12/11/2017 | Common Stock | 32,350 |
| Stock Option (right to buy) | \$ 8.75 | 02/09/2011 | | M | 3,882 | (4) 03/01/2019 | Common Stock | 7,764 |

Reporting Owners

Reporting Owner Name / Address

Relationships

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Director 10% Owner Officer Other

Doughty Brian
651 CAMPUS DRIVE
ST. PAUL, MN 55112

VP of
Commerical
Operations

Signatures

/s/ John R. Remakel as Attorney-in-Fact for Brian Doughty pursuant to Power of Attorney previously filed.

02/11/2011

__Signature of Reporting Person

Date

Explanation of Responses:

- * If the form is filed by more than one reporting person, *see* Instruction 4(b)(v).
 - ** Intentional misstatements or omissions of facts constitute Federal Criminal Violations. *See* 18 U.S.C. 1001 and 15 U.S.C. 78ff(a).
- The price reported in Column 4 is a weighted average price. These shares were sold in multiple transactions at prices ranging from \$10.02 to \$10.80 inclusive. The reporting person undertakes to provide Cardiovascular Systems, Inc., any security holder of Cardiovascular Systems, Inc. or the staff of the Securities and Exchange Commission upon request, full information regarding the number of shares sold at each separate price within the range set forth in this footnote.
- (1) Fully exercisable.
 - (2) Exercisable: 16,175 on 2/25/10 and 2/25/11.
 - (3) Exercisable: 3,882 on 3/2/10 and 3/2/11.

Note: File three copies of this Form, one of which must be manually signed. If space is insufficient, *see* Instruction 6 for procedure. Potential persons who are to respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB number.