THORATEC CORP Form DEF 14A April 11, 2011

(2)

(3)

(4)

QuickLinks -- Click here to rapidly navigate through this document

Aggregate number of securities to which transaction applies:

Proposed maximum aggregate value of transaction:

which the filing fee is calculated and state how it was determined):

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

SCHEDULE 14A

	Proxy Statement Pursuant to Section 14(a) of the Securities Exchange Act of 1934 (Amendment No.				
Filed	l by the Registrant ý				
Filed	by a Party other than the Registrant o				
Chec	ck the appropriate box:				
o	Preliminary Proxy Statement				
o	Confidential, for Use of the Commission Only (as permitted by Rule 14a-6(e)(2))				
ý	Definitive Proxy Statement				
o	Definitive Additional Materials				
o	Soliciting Material under §240.14a-12				
	Thoratec Corporation				
	(Name of Registrant as Specified In Its Charter)				
	(Name of Person(s) Filing Proxy Statement, if other than the Registrant)				
Payr	nent of Filing Fee (Check the appropriate box):				
ý	No fee required.				
o	Fee computed on table below per Exchange Act Rules 14a-6(i)(1) and 0-11.				
	(1) Title of each class of securities to which transaction applies:				

Per unit price or other underlying value of transaction computed pursuant to Exchange Act Rule 0-11 (set forth the amount on

Total fee paid:

(5)

o	Fee paid previously with preliminary materials.				
0	Check box if any part of the fee is offset as provided by Exchange Act Rule 0-11(a)(2) and identify the filing for which the offsetting fee was paid previously. Identify the previous filing by registration statement number, or the Form or Schedule and the date of its filing.				
	(1)	Amount Previously Paid:			
	(2)	Form, Schedule or Registration Statement No.:			
	(3)	Filing Party:			
	(4)	Date Filed:			

April 11, 2011

Dear Shareholder:

You are cordially invited to attend the Thoratec Corporation 2011 Annual Meeting of Shareholders to be held on Wednesday, May 25, 2011 at 8:00 a.m., Pacific Daylight Time, at our executive offices located at 6101 Stoneridge Drive, Pleasanton, California 94588. Details regarding the meeting and the business to be conducted are more fully described in the accompanying Notice of Annual Meeting of Shareholders and Proxy Statement.

Your vote is very important. Whether or not you plan to attend the Annual Meeting, please vote as soon as possible. You may vote in person at the meeting or by mail, by telephone or over the Internet. Your vote by written proxy, by telephone or over the Internet will ensure your representation at the Annual Meeting if you cannot attend in person. Please review the instructions on the proxy card regarding your voting options.

Thank you for your ongoing support of and continued interest in Thoratec Corporation.

Very truly yours,

GERHARD F. BURBACH
President and Chief Executive Officer

Corporate Headquarters

Thoratec Corporation, 6035 Stoneridge Drive, Pleasanton, CA 94588 Tel 925-847-8600 Fax 925-847-8574 www.thoratec.com

THORATEC CORPORATION

NOTICE OF 2011 ANNUAL MEETING OF SHAREHOLDERS To Be Held on May 25, 2011

To the Shareholders of Thoratec Corporation:

NOTICE IS HEREBY GIVEN, that the 2011 Annual Meeting of Shareholders of Thoratec Corporation, a California corporation ("Thoratec" or the "Company"), will be held on Wednesday, May 25, 2011 at 8:00 a.m., Pacific Daylight Time, at our executive offices located at 6101 Stoneridge Drive, Pleasanton, California 94588 for the following purposes:

To elect eight directors to serve for the ensuing year or until their successors are elected and qualified;

To conduct an advisory vote on the compensation of the Company's named executive officers;

To conduct an advisory vote on the frequency of the advisory vote on the compensation of the Company's named executive officers:

To ratify the appointment of Deloitte & Touche LLP as independent auditors of the Company for its fiscal year ending December 31, 2011; and

To transact such other business as may properly come before the meeting or any adjournment thereof.

The foregoing items of business are more fully described in the Proxy Statement accompanying this Notice. Only shareholders of record at the close of business on April 1, 2011 are entitled to notice of, to attend and to vote at the meeting and any adjournments thereof. All shareholders are cordially invited to attend the meeting in person. Any shareholder attending the meeting may vote in person even if such shareholder previously signed and returned a proxy. If you own shares through a broker, and you wish to attend and vote in person at the meeting, you must obtain from your broker a proxy issued in your name.

IMPORTANT NOTICE REGARDING THE AVAILABILITY OF PROXY MATERIALS FOR THE 2011 ANNUAL MEETING OF SHAREHOLDERS TO BE HELD ON MAY 25, 2011.

The Proxy Statement, the Proxy Card, and the Annual Report to Shareholders are available at http://phx.corporate-ir.net/phoenix.zhtml?c=95989&p=proxy.

For the Board of Directors

DAVID A. LEHMAN
Senior Vice President, General Counsel and Secretary

IMPORTANT: WHETHER OR NOT YOU EXPECT TO ATTEND THE MEETING, PLEASE COMPLETE, DATE AND SIGN THE ENCLOSED PROXY AND MAIL IT PROMPTLY IN THE ENCLOSED POSTAGE PAID ENVELOPE OR VOTE BY TELEPHONE OR THROUGH THE INTERNET ACCORDING TO THE INSTRUCTIONS INCLUDED WITH THE PROXY CARD.

THORATEC CORPORATION

PROXY STATEMENT FOR 2011 ANNUAL MEETING OF SHAREHOLDERS

INFORMATION CONCERNING SOLICITATION AND VOTING

The Board of Directors of Thoratec Corporation, a California corporation ("Thoratec" or the "Company"), is furnishing this Proxy Statement to you in connection with our solicitation of proxies to be used at our 2011 Annual Meeting of Shareholders to be held on Wednesday, May 25, 2011 at 8:00 a.m., Pacific Daylight Time, or at any adjournments or postponements thereof (the "Annual Meeting"), for the purposes set forth in this Proxy Statement and in the accompanying Notice of 2011 Annual Meeting of Shareholders. The Annual Meeting will be held at our principal executive offices located at 6101 Stoneridge Drive, Pleasanton, California 94588. The telephone number at that address is (925) 847-8600.

We have elected to use the Internet as the primary means of providing our proxy materials for the Annual Meeting to shareholders. Consequently, we will send to most shareholders a Notice of Internet Availability of Proxy Materials with instructions for accessing the proxy materials, including this Proxy Statement and our Annual Report, and for voting by mail, by telephone, over the Internet or in person. All shareholders who do not receive the Notice of Internet Availability of Proxy Materials will receive a paper copy of the proxy materials by mail. The Notice of Internet Availability of Proxy Materials also provides information on how shareholders may obtain paper copies of our proxy materials free of charge, if they so choose. The electronic delivery of our proxy materials will significantly reduce our printing and mailing costs and the environmental impact of the proxy materials.

The date of this Proxy Statement is April 1, 2011. For those shareholders receiving paper copies of proxy materials, we intend to mail this Proxy Statement and the accompanying Proxy Card, Notice of 2011 Annual Meeting of Shareholders and Annual Report on or about April 13, 2011 to shareholders entitled to vote at the Annual Meeting. For those shareholders receiving a Notice of Internet Availability of Proxy Materials, we intend to mail the Notice of Internet Availability of Proxy Materials on or about April 13, 2011 to shareholders entitled to vote at the Annual Meeting.

Record Date and Shares Outstanding

Shareholders of record at the close of business on April 1, 2011 (the "Record Date"), are entitled to notice of, and to vote at, the Annual Meeting. As of the Record Date, 57,206,087 shares of the Company's common stock ("Common Stock") were outstanding. The Company's Common Stock is listed on the NASDAQ Global Select Market.

Voting

Every shareholder voting for the election of directors may exercise cumulative voting rights and give one candidate a number of votes equal to the number of directors to be elected multiplied by the number of votes to which the shareholder's shares held of record on the Record Date are entitled or, alternatively, distribute such shareholder's votes on the same principle among as many candidates as the shareholder may select, provided that votes cannot be cast for more than eight candidates. However, no shareholder will be entitled to cumulate votes for a candidate unless the candidate's name has been placed in nomination prior to the voting and the shareholder, or any other shareholder, has given notice at the meeting prior to the voting of the intention to cumulate votes. On all other matters, each share is entitled to one vote on each proposal that properly comes before the Annual Meeting.

Methods of Voting

You may vote by mail, by telephone, over the Internet or in person at the meeting.

Voting by Mail. To vote by mail, if you received or choose to receive the proxy card by mail, you may sign and return the proxy card in the prepaid and addressed envelope provided with the proxy card. By signing and returning the proxy card, you are authorizing individuals named on the proxy card (known as "proxies") to vote your shares at the meeting in the manner you indicate. We encourage you to sign and return the proxy card even if you plan to attend the meeting. In this way, your shares will be voted if you are unable to attend the meeting. If you received more than one proxy card, it is an indication that your shares are held in multiple accounts. Please sign and return all proxy cards to ensure that all of your shares are voted.

Voting by Telephone. To vote by telephone, please follow the instructions included with your proxy card or the Notice of Internet Availability of Proxy Materials. If you vote by telephone, you do not need to complete and mail your proxy card.

Voting over the Internet. To vote over the Internet, please follow the instructions included with your proxy card or the Notice of Internet Availability of Proxy Materials. If you vote over the Internet, you do not need to complete and mail your proxy card.

Voting in Person. If you plan to attend the meeting and vote in person, we will provide you with a ballot at the meeting. If your shares are registered directly in your name, that is, you hold a share certificate, you are considered the shareholder of record and you have the right to vote in person at the meeting. If your shares are held in the name of your broker or other nominee, you are considered the beneficial owner of shares held in street name. As a beneficial owner, if you wish to vote at the meeting, you will need to bring with you to the meeting a legal proxy from your broker or other nominee authorizing you to vote such shares. Contact your broker or other record holder of the shares for assistance if this applies to you.

Quorum; Abstentions; Broker Non-Votes

The presence in person or by proxy of a majority of the shares of Common Stock outstanding and entitled to vote on the Record Date is required for a quorum at the Annual Meeting. Both abstentions and broker non-votes are counted as present for purposes of determining the presence of a quorum, but broker non-votes will not be counted towards the tabulation of votes cast on proposals presented to shareholders.

"Broker non-votes" include shares for which a bank, broker or other nominee (i.e., record) holder has not received voting instructions from the beneficial owner and for which the nominee holder does not have discretionary power to vote on a particular matter. Under the rules that govern brokers who are record owners of shares that are held in brokerage accounts for the beneficial owners of the shares, brokers who do not receive voting instructions from their clients have the discretion to vote uninstructed shares on routine matters but have no discretion to vote the uninstructed shares on non-routine matters. The proposals to be voted on at the Annual Meeting include both routine matters, such as the ratification of our independent auditors, and non-routine matters, such as the election of directors, the advisory vote on the compensation of our named executive officers, and the advisory vote on the frequency of the advisory vote on the compensation of our named executive officers.

Vote Required

The election of directors at the Annual Meeting requires the affirmative vote of a plurality of the votes cast at the Annual Meeting.

Each other item to be voted on at the Annual Meeting requires the affirmative vote of a majority of the shares present in person or represented by proxy and entitled to vote at the Annual Meeting.

All votes will be tabulated by the inspector of elections appointed for the Annual Meeting. The inspector of elections will separately tabulate affirmative and negative votes, abstentions and broker non-votes. David A. Lehman, Senior Vice President, General Counsel and Secretary of the Company, has been appointed as the inspector of elections for the Annual Meeting.

Revocability of Proxies

Any proxy given pursuant to this solicitation may be revoked by the person giving it at any time before its use by delivering to our Corporate Secretary a written notice of revocation or a duly executed proxy bearing a later date or by attending the Annual Meeting and voting in person. Your presence at the Annual Meeting will not in and of itself be sufficient to revoke your proxy.

Solicitation of Proxies

The cost of soliciting proxies in connection with this Proxy Statement has been or will be borne by us. In addition to solicitation by mail, we may request that banks, brokers and other custodians, nominees and fiduciaries send Proxy Statements to the beneficial owners of Common Stock. We may reimburse these banks, brokers and other custodians, nominees, fiduciaries and other persons representing beneficial owners of Common Stock for their expenses in forwarding solicitation material to such beneficial owners. Some of our directors, officers and other employees may, without additional compensation, solicit proxies personally, or by telephone, facsimile or e-mail. We have also engaged MacKenzie Partners, Inc., an outside proxy solicitor, to assist us in soliciting proxies in conjunction with the Annual Meeting. We estimate the cost of the outside proxy solicitation services will be approximately \$10,000.

Availability of Proxy Materials

This Proxy Statement, our Annual Report, and the form of Proxy Card are available on the internet at http://phx.corporate-ir.net/phoenix.zhtml?c=95989&p=proxy. Each of these documents can be viewed online or printed and will remain available through the conclusion of the Annual Meeting.

Householding of Annual Disclosure Documents

The Securities and Exchange Commission (the "SEC") has approved a rule governing the delivery of annual disclosure documents. This rule allows us to send a single set of our Annual Report and Proxy Statement, or Notice of Internet Availability of Proxy Materials, as applicable, to any household at which two or more Thoratec shareholders reside if we believe that the shareholders are members of the same family. Some banks, brokers and other intermediaries may be participating in this practice of "householding" proxy statements, annual reports and notices of Internet availability of proxy materials. If you and others who share your mailing address own Common Stock in street name, meaning through bank or brokerage accounts, you may have received a notice that your household will receive only one annual report and proxy statement, or notice of Internet availability of proxy materials, as applicable, from each company whose stock is held in such accounts. Unless you responded that you did not want to participate in householding, a single copy of this Proxy Statement and the 2010 Annual Report, or Notice of Internet Availability of Proxy Materials, as applicable, have been sent to your address. This rule benefits both our shareholders and us. It reduces the volume of duplicate information received at a shareholder's house and helps reduce our expenses. Each shareholder that receives proxy materials by mail, however, will continue to receive individual proxy cards or voting instruction forms.

If your household has previously received a single set of disclosure documents, but you would prefer to receive your own copy this year or in future years, you should contact your bank, broker or other nominee record holder. We can also deliver a separate copy of our Annual Report, Proxy Statement or Notice of Internet Availability of Proxy Materials to any shareholder upon either written request to Thoratec Corporation, 6035 Stoneridge Drive, Pleasanton, California 94588, Attention: Corporate Secretary, or upon oral request by calling (925) 847-8600. Similarly, if you share an address with another Thoratec shareholder and together both of you wish to receive only a single set of our annual disclosure documents, please follow the same instructions. In addition, copies of our SEC filings and certain other submissions are made available free of charge on the investor relations page of our website at www.thoratec.com as soon as practicable after electronically filing or furnishing these documents with the SEC.

BOARD OF DIRECTORS STRUCTURE AND COMPENSATION

Structure and Committees

The current members of our Board of Directors (the "Board") are Gerhard F. Burbach, J. Daniel Cole, Steven H. Collis, Neil F. Dimick, Elisha W. Finney, D. Keith Grossman, Paul A. LaViolette and Daniel M. Mulvena. Mr. Dimick serves as Chairman of the Board. The Board held a total of thirteen meetings during our 2010 fiscal year, which ended on January 1, 2011. During the 2010 fiscal year, the Board had an Audit Committee, a Compensation Committee, and a Corporate Governance and Nominating Committee. Each director attended at least 75% of the aggregate number of meetings of the Board and the committees on which he or she served. While the Company encourages all members of the Board to attend the annual meetings of shareholders, there is no formal policy as to their attendance at annual meetings. All sitting members of the Board attended the 2010 Annual Meeting of Shareholders.

The Board has determined that each of the current directors standing for re-election is an independent director, as defined by The Nasdaq Stock Market, Inc. ("NASDAQ") corporate governance listing standards and Rule 10A-3 of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), except for Gerhard F. Burbach, who serves as our President and Chief Executive Officer. The Board annually evaluates the independence of its members. A director will not qualify as independent unless the Board affirmatively determines that the director has no material relationship with the Company. In making its determination, the Board considers business and other applicable relationships in accordance with the director independence standards of NASDAQ, as currently in effect. The Board has also determined that all members of the Board's committees are independent of the Company under the director independence standards of NASDAQ. In addition, our independent directors meet in regularly scheduled executive sessions throughout the year.

Board Leadership Structure

The Board does not have a policy on whether the same person should serve as both the chief executive officer and chairman of the board or, if the roles are separate, whether the chairman should be selected from the non-employee directors or should be an employee. The Board believes that it should have the flexibility to make these determinations at any given point in time in the way that it believes best to provide appropriate leadership for the Company at that time. Over its history, the Company has had both a combined chairman and chief executive officer (1976 to 1994) and a separate non-employee chairman and chief executive officer (1995 to present). The Board believes that its current leadership structure, with Mr. Dimick serving as Board Chairman and Mr. Burbach serving as Chief Executive Officer, is in the best interest of shareholders at this time. The current structure ensures a greater role for the independent directors in the oversight of the Company and active participation of the independent directors in setting agendas and establishing priorities and procedures for the work of the Board.

Board Role in Risk Oversight

The Board's role in the Company's risk oversight process includes receiving regular reports from members of senior management on areas of material risk to the Company, including operational, financial, legal, regulatory and strategic risks. The full Board (or the appropriate committee in the case of risks that are under the purview of a particular committee) receives these reports from the executive responsible for the appropriate subject area within the organization to enable it to understand our risk identification, risk management and risk mitigation strategies and activities. When a committee receives the report, the chairperson of the relevant committee reports on the discussion to the full Board during the committee reports portion of the next Board meeting. This enables the Board and its committees to coordinate the risk oversight role, particularly with respect to risk interrelationships.

The Compensation Committee oversees risk management as it relates to our compensation plans, policies and practices in connection with structuring our executive and non-executive compensation programs. The Compensation Committee retained Radford Surveys + Consulting ("Radford"), an independent compensation consultant, to prepare an analysis regarding whether our compensation plans, policies and practices create risks that are reasonably likely to have a material adverse effect on Thoratec. Radford was engaged by, reported to, and was accountable to the Compensation Committee. The Compensation Committee, relying in part on the Radford analysis, reviewed the elements of our compensation programs and believes that risks arising from our compensation plans, policies and practices for our employees are not reasonably likely to have a material adverse effect on the Company. In addition, the Compensation Committee believes that the mix and design of the elements of executive compensation do not encourage management to assume excessive risks.

This Proxy Statement, including the preceding paragraph, contains "forward-looking statements" (as defined in the Private Securities Litigation Reform Act of 1995). These statements are based on our current expectations and involve risks and uncertainties, which may cause results to differ materially from those set forth in the statements. The forward-looking statements may include statements regarding actions to be taken by us. We undertake no obligation to publicly update any forward-looking statement, whether as a result of new information, future events or otherwise. Forward-looking statements contained in this Proxy Statement should be considered in light of the many uncertainties that affect our business and specifically those factors discussed from time to time in Thoratec's public reports filed with the Securities and Exchange Commission, such as those discussed under the heading, "Risk Factors," in Thoratec's most recent annual report on Form 10-K, and as may be updated in subsequent SEC filings.

Audit Committee

Our Audit Committee met nine times during fiscal 2010. The current members of this committee are Ms. Finney and Messrs. Cole and Dimick, with Ms. Finney serving as Chairwoman. This committee operates under a written charter adopted by our Board. The Audit Committee reviews and reassesses the charter at least annually, and the charter was last amended in March 2010.

The Board has determined that two members of the Audit Committee, Mr. Dimick and Ms. Finney, are "audit committee financial experts," as that term is defined under Section 407 of the Sarbanes-Oxley Act of 2002 and the rules promulgated by the SEC in furtherance of Section 407. As described above, Ms. Finney and Messrs. Cole and Dimick are independent directors. The purposes of our Audit Committee include:

5

Overseeing our accounting and mancial reporting process;
Overseeing the audits of our financial statements;
Overseeing our relationship with our independent auditors; and

Overseeing our system of internal controls.

In discharging its duties, our Audit Committee, among its other duties:

Recommends to the Board the selection of the independent auditors and their compensation, evaluates the independent auditors and, where appropriate, recommends the replacement of the independent auditors;

Meets with management and the independent auditors to review and discuss the annual financial statements and the report of the independent auditors thereon and, to the extent the independent auditors or management brings any such matters to the attention of the Audit Committee, to discuss significant issues encountered in the course of the audit work, if any, such as restrictions on the scope of activities or access to required information;

Meets quarterly with management and the independent auditors to review and discuss the quarterly financial statements and review quarterly earnings press releases;

Reviews significant changes to our accounting principles and practices proposed by the independent auditors or management;

Meets with management and the independent auditors to review and discuss reports on the adequacy and effectiveness of our internal controls; and

Reviews and approves all related party transactions.

See "Report of the Audit Committee of the Board of Directors" below for more information.

Compensation Committee

Our Compensation Committee met nine times during fiscal 2010. The current members of this committee are Messrs. Collis, LaViolette and Mulvena, with Mr. LaViolette serving as Chairman. Mr. Mulvena served as Chairman of this committee until the 2010 Annual Meeting of Shareholders at which time Mr. LaViolette was appointed Chairman of this committee. This committee operates under a written charter adopted by our Board, which was most recently amended in February 2010. As described above, all members of the Compensation Committee are independent directors. In addition, all Compensation Committee members are "outside directors" within the meaning of Section 162(m) of the Internal Revenue Code of 1986, as amended (the "Code"), to allow the Company a tax deduction for certain employee compensation exceeding \$1,000,000 for an individual. All Compensation Committee members are also "non-employee directors" within the meaning of Exchange Act Rule 16b-3 to exempt certain option grants and similar transactions from the short-swing profits prohibition of Section 16 of the Exchange Act. Our Compensation Committee:

Reviews compensation and benefits for our employees generally and for our senior executives specifically, and makes recommendations to the full Board; and

Has authority to grant-equity based awards under our the Amended and Restated Thoratec 2006 Incentive Stock Plan (the "2006 Plan") to officers, employees and consultants.

Among the Compensation Committee's duties and responsibilities set forth in its charter, the committee has direct responsibility for and authority to (i) review and approve corporate goals and objectives relevant to chief executive officer compensation, evaluate the chief executive officer's performance in light of those goals and objectives, and recommend the chief executive officer's compensation to the Board based on this evaluation; (ii) develop, review and approve compensation policies and practices applicable to the Company's officers who are deemed to be "executive officers" of the Company for SEC reporting purposes, including the criteria upon which executive compensation is based, the specific relationship of corporate performance to executive compensation and the composition of benefits; (iii) make recommendations to the Board with respect to the Company's

incentive compensation and equity-based compensation plans; (iv) review the compensation and benefits offered to non-employee directors and recommend changes to the Board as appropriate; (v) review whether the Company's compensation policies and practices encourage unnecessary or excessive risk taking, and evaluate whether the financial incentives and risks relating to such policies and practices are appropriate; and (v) administer and evaluate the Company's incentive, equity-based and other executive compensation programs, including approving guidelines, making grants and awards and establishing annual award levels for employee stock options, units, restricted shares and other incentive and equity-based awards under such programs, interpreting and promulgating rules relating to the plans, modifying or canceling grants or awards, designating eligible participants and imposing limitations and conditions on grants or awards. As set forth in the Compensation Committee's charter, the committee has the authority to delegate such of its authority and responsibilities as the committee deems proper to members of the committee or a subcommittee.

For each executive officer other than the chief executive officer, the chief executive officer makes recommendations to the Compensation Committee for annual adjustments to compensation levels and short-term and long-term incentive compensation components, based upon his assessment of each executive officer's performance, retention risks, potential within the organization and the results of market studies, as described in the Compensation Discussion and Analysis section of this Proxy Statement. The Compensation Committee reviews with the chief executive officer these assessments and recommendations and determines whether or not to approve and/or modify his recommendations.

Consistent with prior years, the Compensation Committee retained Radford, an independent compensation consultant. The Committee requested Radford to prepare competitive market studies as to, and advise the Committee on, both executive and director compensation, including base salary or fees, cash incentive compensation, and long-term equity incentive compensation for 2010. Radford was engaged by, reported to, and was accountable to the Committee, and the firm was not allowed to conduct any other work for Thoratec without the authorization of the Committee. Radford did not provide any services to Thoratec in 2010 beyond its engagement as an advisor to the Committee. Radford is an independent consultant specializing in compensation matters in the technology industry.

See the discussion in the Compensation Discussion and Analysis section of this Proxy Statement, including the Competitive Market Analysis section, for a full discussion regarding processes and procedures for the determination of executive compensation.

Compensation Committee Interlocks and Insider Participation

During fiscal 2010, none of our executive officers served on the board of directors or compensation committee of another company that had an executive officer serve on our Board or our Compensation Committee. In addition, none of the members of our Compensation Committee was an officer or employee of Thoratec or any of its subsidiaries during fiscal 2010 or was formerly an officer of Thoratec or any of its subsidiaries at any time in the past.

Corporate Governance and Nominating Committee

Our Corporate Governance and Nominating Committee met four times during fiscal 2010. The current members of this committee are Messrs. Cole, Collis and Dimick, with Mr. Cole serving as Chairman. Mr. Grossman served as a member of this committee until the 2010 Annual Meeting of Shareholders. This committee operates under a written charter adopted by our Board, which was last amended in May 2007. The purpose of the Corporate Governance and Nominating Committee is to:

Identify and approve individuals qualified to serve as members of the Board;

Select director nominees for the next annual meeting of shareholders;

7

Review laws, rules and regulations regarding corporate governance and make appropriate recommendations to the Board; and

Provide oversight with respect to corporate governance and ethical conduct.

Board Compensation

Directors who are employees of Thoratec do not receive additional compensation for serving on the Board or its committees. The following table sets forth the compensation earned by Thoratec's non-employee directors for their service on the Board in 2010.

2010 DIRECTOR COMPENSATION

	Fees Earned or Paid in Cash	Stock Awards(1)(2)	Total
Name	(\$)	(\$)	(\$)
J. Daniel Cole	53,000	208,350	261,350
Steven H. Collis	44,000	208,350	252,350
Neil F. Dimick	68,000	208,350	276,350
Elisha W. Finney	55,000	208,350	263,350
D. Keith Grossman	39,000	208,350	247,350
Paul A. LaViolette	45,500	208,350	253,850
Daniel M. Mulvena	44,000	208,350	252,350

(1)
Stock awards consist of automatic annual grants of 5,000 restricted stock units made on May 19, 2010. Amounts shown do not reflect compensation actually received by the director. Instead, the amounts shown reflect the grant date fair value of the restricted stock units computed in accordance with FASB ASC Topic 718. The assumptions made in the valuation of such restricted stock units are set forth under Note 11 of the Notes to Consolidated Financial Statements in Thoratec's Annual Report on Form 10-K for the year ended January 1, 2011.

As of January 1, 2011, none of the non-employee directors held outstanding options and in addition, Messrs. Cole, Dimick, Grossman and Mulvena each held restricted stock awards with respect to 12,500 shares of Common Stock, and Mr. Collis, Ms. Finney and Mr. LaViolette held restricted stock awards with respect to 14,750, 13,000, and 10,250 shares of Common Stock, respectively.

Narrative Disclosure to Director Compensation Table

For the 2010 fiscal year, each non-employee director received a \$35,000 annual retainer. Each member of the Audit Committee, other than the Chairperson, received an additional \$10,000 annual retainer. Each member of the Compensation Committee, other than the Chairperson, received an additional \$6,000 annual retainer. Each member of the Corporate Governance and Nominating Committee, other than the Chairperson, received an additional \$4,000 annual retainer. In addition to the annual Board retainer, the Chairperson of the Board received a \$15,000 annual retainer. In lieu of the annual Audit Committee retainer, the Chairperson of the Audit Committee received a \$20,000 annual retainer; in lieu of the annual Compensation Committee retainer, the Chairperson of the Compensation Committee received a \$12,000 annual retainer; and in lieu of the Corporate Governance and Nominating Committee retainer, the Chairperson of the Corporate Governance and Nominating Committee received an \$8,000 annual retainer. All retainers are paid in cash on a quarterly basis in arrears. Directors do not receive any additional compensation for actions by unanimous written consent of the Board or any of the committees.

Non-employee directors are eligible to participate in the 2006 Plan. The 2006 Plan provides that in addition to any other discretionary awards that non-employee directors may be granted, non-employee directors will automatically be granted either restricted stock bonus awards or restricted stock units, as follows:

Initial grant of a restricted stock bonus award or restricted stock units with respect to 7,000 shares of Common Stock ("Initial Grant") upon commencing service on the Board. Such shares or units will vest in four equal annual installments beginning on the first anniversary of the effective date of commencement of service as a Board member, subject to continued service.

Annual grant of a restricted stock bonus award or restricted stock units with respect to 5,000 shares of Common Stock ("Annual Grant"). Such shares or units will vest in four equal annual installments beginning on the first anniversary of the grant date, subject to continued service. The Annual Grant is granted on the date of the first meeting of the Board following the annual meeting of the Company's shareholders.

The Initial Grant and Annual Grants are made at no cost to the non-employee directors. Each of the non-employee directors received an Annual Grant of 5,000 restricted stock units on May 19, 2010.

Board Equity Ownership Guidelines

In 2010, the Board adopted equity ownership guidelines such that effective as of the 2011 fiscal year the Board shall be subject to guidelines whereby (i) the aggregate value of the total shares of Company stock held by each member of the Board shall be at least five (5) times the annual base cash compensation for members of the Board, (ii) all members of the Board will have five (5) years from January 1, 2011 to become compliant with the Equity Ownership Guidelines, and (iii) newly elected or appointed members of the Board will have five (5) years from the effective date they join the Board to become compliant

CODE OF ETHICS AND CORPORATE GOVERNANCE

We have adopted a Code of Ethics that applies to all of our directors, officers and employees, and which meets the requirements of Item 406 of Regulation S-K of the Exchange Act. Our Code of Ethics is available on our investor relations website at *www.thoratec.com*, under "Investor Relations Corporate Governance." The code covers topics, including but not limited to, potential conflicts of interest, compliance with applicable governmental laws, rules and regulations and the reporting of violations of the code. Any amendments to the Code of Ethics will be posted on our website. The Board has the sole authority to approve any waiver of the Code of Ethics relating to the activities of any of our senior financial officers, other executive officers and directors. Any waiver of the Code of Ethics for these individuals will be disclosed promptly on Form 8-K or any other means approved by applicable SEC rules and NASDAQ listing standards.

We have also adopted Corporate Governance Guidelines that provide guidelines for the conduct and operation of the Board, including the composition and selection of members of the Board, role of the Board, orientation and education of directors, conduct of Board meetings, structure and conduct of Board committees, and Board interaction with management, advisors, investors and shareholders. Our Corporate Governance Guidelines are available on our investor relations website at www.thoratec.com, under "Investor Relations Corporate Governance."

For information on our corporate governance practices in addition to our Code of Ethics and Corporate Governance Guidelines, including the Company's Compliance Program, the charters approved by the Board for the Audit Committee, the Compensation Committee, and the Corporate Governance and Nominating Committee, and the Audit Committee Complaint Procedures, please visit the Company's investor relations website at www.thoratec.com, under "Investor Relations Corporate Governance."

DIRECTOR NOMINATIONS

Criteria for Nomination to the Board

The Corporate Governance and Nominating Committee considers the appropriate balance of experience, skills and personal characteristics required of Board members, and seeks to insure that at least a majority of the directors are independent under the rules of NASDAQ, and that members of the Company's Audit Committee meet the financial literacy and other requirements under NASDAQ and SEC rules. While the Corporate Governance and Nominating Committee has not established specific minimum qualifications for director candidates, nominees for director are selected on the basis of their depth and breadth of experience, wisdom, integrity, ability to make independent analytical inquiries, understanding of the Company's business environment, willingness to devote adequate time to Board duties, the interplay of the candidate's experience and skills with those of other Board members, and the extent to which the candidate would be a desirable addition to the Board and any committees of the Board.

Shareholder Recommendations for Director

The Corporate Governance and Nominating Committee will consider written recommendations for director candidates from shareholders. Any such recommendations should be submitted to the Corporate Governance and Nominating Committee, c/o the Corporate Secretary of the Company, and should include the following information: (a) all information relating to the candidate that is required to be disclosed pursuant to Regulation 14A under the Exchange Act (including the person's written consent to being named in the proxy statement as a nominee and to serving as a director if elected); (b) the name(s) and address(es) of the shareholder(s) making the recommendation and the number of shares of Common Stock that are owned beneficially and of record by the shareholder(s); and (c) appropriate biographical information and a statement as to the qualifications of the candidate.

Alternatively, shareholders intending to appear at an annual meeting of shareholders in order to nominate a candidate for election by the shareholders at the meeting (in cases where the Board does not intend to nominate the candidate or where the Corporate Governance and Nominating Committee was not requested to consider the candidate) must comply with the procedures in Section 4(c) of the Company's By-Laws. Shareholders can obtain a copy of the Company's By-Laws, without charge, by writing to our Corporate Secretary. Under the Company's By-Laws, and as described under "Deadline for Receipt of Shareholder Proposals" below, written notice of a nomination must be received by our Corporate Secretary no earlier than January 26, 2012 and no later than February 25, 2012 in order to be considered at the 2012 annual meeting of shareholders.

Process for Identifying and Evaluating Director Candidates

The process for identifying and evaluating candidates for the Board is initiated by identifying a slate of candidates who meet the criteria for selection as nominees and have the specific qualities or skills being sought based on input from members of the Board and, if the Corporate Governance and Nominating Committee deems appropriate, a third-party search firm. These candidates are evaluated by the Corporate Governance and Nominating Committee by reviewing the candidates' biographical information and qualifications, and by checking the candidates' references. Qualified nominees are interviewed by at least one member of the Corporate Governance and Nominating Committee. Promising candidates meet with all members of the Board, and based on input from such interviews and the information obtained by the Corporate Governance and Nominating Committee, the committee evaluates which of the prospective candidates are qualified to serve as directors and whether the committee should recommend to the Board that the Board nominate, or elect to fill a vacancy, these final prospective candidates. Candidates recommended by the Corporate Governance and

Nominating Committee are presented to the Board for selection as nominees to be presented for election by the shareholders or to fill a vacancy.

The Corporate Governance and Nominating Committee evaluates shareholder-recommended candidates using the same process and the same criteria it uses to evaluate candidates from other sources.

Board Nominees for the Annual Meeting

Ms. Finney and Messrs. Burbach, Cole, Collis, Dimick, Grossman, LaViolette and Mulvena, who are all current members of the Board, are the directors standing for re-election at the Annual Meeting.

COMMUNICATIONS WITH THE BOARD OF DIRECTORS

Shareholders may communicate directly with the Board by sending a certified or registered letter to any individual director, group of directors or Board committee c/o the Corporate Secretary of the Company, at the Company's main business address set forth above or by sending an email to any of the same individuals or groups at board@thoratec.com. The Corporate Secretary will review the correspondence and forward it to the individual director, group of directors or committee of the Board to whom the communication is directed, as applicable, if the communication is relevant to Thoratec's business and financial operations, policies or corporate philosophy. Communications that are threatening, illegal or similarly inappropriate, and advertisements, solicitations for periodical or other subscriptions, and other similar communications generally will not be forwarded to any director or group of directors.

PROPOSAL ONE

ELECTION OF DIRECTORS

Nominees

A board of eight directors is to be elected at the Annual Meeting. Unless otherwise instructed, the proxy holders will vote the proxies received by them for the eight nominees named below, each of whom is presently serving as one of our directors. If additional persons are nominated for election as directors, the proxy holders intend to vote all proxies received by them in accordance with cumulative voting to elect as many of the nominees listed below as possible. In such event, the proxy holders will determine the specific nominees for whom such votes will be cumulated. The term of office for each person elected as a director will continue until the next annual meeting of shareholders or until the successor to such person has been elected and qualified. We do not expect that any nominee will be unable or will decline to serve as a director.

The following table provides information concerning our director nominees:

Name of Nominee	Age	Position with Our Company	Director Since
Neil F. Dimick	61	Director and Chairman of the Board	2003
		Director, President and Chief Executive	
Gerhard F. Burbach	49	Officer	2006
J. Daniel Cole	64	Director	1997
Steven H. Collis	49	Director	2008
Elisha W. Finney	49	Director	2007
D. Keith Grossman	50	Director	1996
Paul A. LaViolette	53	Director	2009
Daniel M. Mulvena	62	Director	1997

The principal occupations, positions and directorships for at least the past five years of our director nominees, as well as certain information regarding their individual experience, qualifications, attributes and skills that led our Board of Directors to conclude that they should serve on the Board, are described below. In addition to the information presented below, we also believe that all of our director nominees possess high degrees of integrity and honesty and adhere to the highest ethical standards. They each have demonstrated business acumen and an ability to exercise sound judgment, as well as a commitment of service to the Company and our Board. There are no family relationships among any of our directors or executive officers.

Neil F. Dimick became a director of our Company in October 2003. In May 2007, Mr. Dimick became Chairman of the Board. Mr. Dimick was Executive Vice President and Chief Financial Officer of AmerisourceBergen Corporation, a pharmaceutical distributor, from August 2001 to May 2002, and served as Senior Executive Vice President and Chief Financial Officer and a director of Bergen Brunswig Corporation and was a member of that board's finance, investment and retirement committees for more than five years prior to its merger with AmeriSource Health in 2001. Mr. Dimick also spent eighteen years with the audit firm Deloitte & Touche LLP, where he was an audit partner and national director of the firm's real estate division. Mr. Dimick currently serves as a member of the board of directors of Alliance Imaging, Inc., Mylan Laboratories, Inc., Resources Connection, Inc. and WebMD Corporation and has additionally in the past five years served as a member of the board of directors of Emdeon Corporation and HLTH Corporation. The Board has selected Mr. Dimick to serve as a director because of his extensive experience serving on public company boards and board committees, as well as his leadership positions with both a major auditing firm and a pharmaceutical distribution company, resulting in a wealth of knowledge on financial, commercial and industry related matters.

Gerhard F. Burbach, President, Chief Executive Officer and Director, joined our Company as President and Chief Executive Officer in January 2006. He was elected to the Board at the same time. From April 2005 to January 2006, Mr. Burbach served as President and Chief Executive Officer of Digirad Corporation, a provider of solid-state imaging products and services to cardiologist offices, hospitals and imaging centers. Before that he served for two years as president and chief executive officer of Bacchus Vascular Inc, a developer of interventional cardiovascular devices. Previously, he served for three years as chief executive officer of Philips Nuclear Medicine, a division of Philips Medical Systems specializing in nuclear medicine imaging systems. Until its acquisition by Philips Medical Systems, he spent four years at ADAC Laboratories, a provider of nuclear medicine imaging equipment and radiation therapy planning systems, where he became president and general manager of the nuclear medicine division. Mr. Burbach also spent six years with the consulting firm of McKinsey & Company, Inc., where he was most recently a senior engagement manager in the firm's healthcare practice. Mr. Burbach also serves as a member of the board of directors of Digirad. The Board has selected Mr. Burbach to serve as a director because of his extensive and highly relevant leadership experience in the medical technology industry, together with his unique perspective on the Company's operations due to his position as our President and Chief Executive Officer.

J. Daniel Cole became a director of our Company in June 1997. Since March 1997, Mr. Cole has been a general partner of the Spray Venture Fund of Boston. Mr. Cole has also been a venture partner at Oxford Bioscience Partners since 2009. Mr. Cole was President and Chief Operating Officer of SciMed Life Systems Corporation, an interventional cardiology products company, from March 1993 to March 1995, and Senior Vice President and Group President of the vascular business of Boston Scientific Corporation, a worldwide developer, manufacturer and marketer of medical devices that are used in a broad range of interventional medical specialties, from March 1995 to March 1997. He has also held a number of senior executive positions at Baxter Healthcare Corporation from April 1982 to January 1993, including President of its Edwards Less Invasive Surgery Division and its Critical Care Division. Mr. Cole also serves as a member of the board of directors of several private companies. The Board has selected Mr. Cole to serve as a director because of his extensive industry knowledge and experience, including operational, leadership and board experience from his executive positions at major medical technology companies, venture capital partnership positions, and memberships on the boards of various private medical technology companies. Mr. Cole is also particularly qualified because of his deep knowledge of Thoratec and its market due to his nearly fourteen years of service on our Board.

Steven H. Collis became a director of our Company in January 2008. Mr. Collis is currently President and Chief Operating Officer of AmerisourceBergen Corporation, and President of its AmerisourceBergen Drug Company (ABDC). Mr. Collis has been named to succeed the current chief executive officer of AmerisourceBergen Corporation effective July 1, 2011. AmerisourceBergen Corporation is a pharmaceutical services company. Mr. Collis joined Bergen Brunswig Corporation, a predecessor to AmerisourceBergen, in 1994 as general manager of Alternate Site Distributors, and was named President of its Specialty Group in 1999. He was previously a principal and general manager of Sterling Medical, a national provider and distributor of medical disposable supplies, health management services and continuous quality management programs to the home care market. The Board has selected Mr. Collis to serve as a director because of his insight and experience in leading a growing corporate enterprise through his current executive leadership positions.

Elisha W. Finney became a director of our Company in June 2007. Ms. Finney is Senior Vice President and Chief Financial Officer of Varian Medical Systems, a manufacturer of medical devices and software for treating cancer. Ms. Finney joined Varian Medical in 1988 as a risk manager and was named corporate treasurer in 1998. She was named Vice President, Finance and Chief Financial Officer in 1999, and promoted to Senior Vice President in 2005. Before that, she held risk management positions with the Fox Group and Beatrice Foods. Ms. Finney served as a member of the board of

directors of Laserscope Inc. from August 2005 until its acquisition by American Medical Systems in July 2006. The Board has selected Ms. Finney to serve as a director because of her experience as a CFO and head of regulatory matters at a publicly-held medical device manufacturer, her ability to chair and contribute to our Audit Committee as a SEC "financial expert" and her experience and perspectives on risk management due to her current and prior industry roles.

D. Keith Grossman became a director of our Company in February 1996. Since September 2007, Mr. Grossman has been a Managing Director with TPG (Texas Pacific Group), a private equity firm, in their healthcare investment team. From January 1996 until January 2006, Mr. Grossman served as our President and Chief Executive Officer. Prior to joining us, Mr. Grossman was a Division President of Major Pharmaceuticals, Inc., from June 1992 to September 1995, at which time it was sold. From July 1988 to June 1992, Mr. Grossman served as the Vice President of Sales and Marketing for Calcitek, Inc., a manufacturer of implantable medical devices and a division of Sulzermedica (formerly Intermedics, Inc.). Prior to 1988, Mr. Grossman held various other sales and marketing management positions within the McGaw Laboratories Division of American Hospital Supply Corporation. Mr. Grossman has served as a member of the board of directors of Intuitive Surgical, Inc. and Kyphon, Inc. Mr. Grossman also serves as a member of the board of directors of several private medical product companies. The Board has selected Mr. Grossman to serve as a director because of his extensive medical technology industry experience, including ten years as our CEO formerly, current and past board positions on both public and private medical technology companies, and related operational, leadership, and market knowledge, as well as his fifteen years of experience as a member of our board.

Paul A. LaViolette became a director of our Company in May 2009. Since January 2011, Mr. LaViolette has been a partner with SV Life Sciences, a venture capital adviser and manager in the life sciences sector, where he was a venture partner from December 2008 until December 2010. Mr. LaViolette was Chief Operating Officer of Boston Scientific until July 2008 and joined Boston Scientific in January 1994. Prior to becoming its Chief Operating Officer, Mr. LaViolette held positions with Boston Scientific as Senior Vice President and Group President, Cardiovascular for Boston Scientific's Scimed, EPT and Target businesses, President of Scimed, Senior Vice President and Group President Nonvascular Businesses, and President, Boston Scientific International, and Vice President International. Prior to joining Boston Scientific, he was employed by C.R. Bard, Inc. in various capacities, including President, U.S.C.I. Division, President, U.S.C.I. Angioplasty Division, Vice President and General Manager, U.S.C.I. Angioplasty Division, and Vice President U.S.C.I. Division. Mr. LaViolette serves as a member of the board of directors of Conceptus, Inc. and TranS1, Inc., as well as a member of the board of directors of several private medical technology companies. The Board has selected Mr. LaViolette to serve as a director because of his operational, leadership and strategic knowledge and experience from serving in executive positions for major medical technology companies and currently as a venture capitalist focused on life sciences companies. He also has significant health policy experience due to his participation as a board member and committee chair for the Advanced Medical Technology Association.

Daniel M. Mulvena became a director of our Company in May 1997. Mr. Mulvena is the founder and owner of Commodore Associates, a consulting company. Mr. Mulvena was Group Vice President Cardiac/Cardiology and a member of the operating committee for Boston Scientific from February 1992 to May 1995. Prior to that, he was the President and Chief Executive Officer and Chairman of Lithox Systems, Inc., an early stage medical device company. Prior to that, Mr. Mulvena held a number of executive positions, including President of the Implants Division and President of the Cardiosurgery Division, at C.R. Bard, Inc. From 197 until February 2011, Mr. Mulvena also served as a member of the board of directors of Zoll Medical Corporation. The Board has selected Mr. Mulvena to serve as a director because of his directly relevant operational experience, knowledge and insight from his leadership positions with medical technology companies and board memberships. Mr. Mulvena's nearly

fourteen years of service on our Board also provides him with particularly deep knowledge concerning our operations, strategy and market.

Required Vote; Recommendation of the Board

The election of directors at the Annual Meeting requires the affirmative vote of a plurality of the votes cast at the Annual Meeting. The eight nominees receiving the highest number of affirmative votes of the shares present or represented and entitled to vote shall be elected as directors. Votes withheld from any director are counted for purposes of determining the presence or absence of a quorum for the transaction of business, but have no further legal effect under California law. Unless marked to the contrary, proxies received will be voted **FOR** the eight nominees as the proxy holders determine in order to elect as many of the eight nominees as possible, whether or not by cumulative voting.

THE BOARD UNANIMOUSLY RECOMMENDS A VOTE "FOR" ELECTION TO THE BOARD OF EACH OF THE NOMINEES PROPOSED ABOVE.

SECURITIES AUTHORIZED FOR ISSUANCE UNDER EQUITY COMPENSATION PLANS

The following table provides information as of January 1, 2011 regarding securities authorized for issuance under the Company's equity compensation plans.

Plan Category	Number of Securities to be Issued Upon Exercise of Outstanding Options, Warrants, and Rights	Weighted-Avera Exercise Price Outstanding Options, Warrants, and Rights	of Equity Compensation Plans (Excluding securities
Equity compensation plans approved			
by security holders(1)	2,694,090	\$ 19	9.81 5,157,807(2)
Equity compensation plans not approved by security holders			
Total	2,694,090	\$ 19	5,157,807

⁽¹⁾Consists of the Amended and Restated Thoratec 2006 Incentive Stock Plan (the "2006 Plan"), the 1997 Stock Option Plan, and the 2002 Employee Stock Purchase Plan (the "ESPP").

(2) Includes 160,168 shares available for future issuance under the ESPP as of January 1, 2011.

16

PROPOSAL TWO

ADVISORY VOTE ON THE COMPENSATION OF OUR NAMED EXECUTIVE OFFICERS ("SAY-ON-PAY VOTE")

Background

The recently enacted Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 (the "Dodd-Frank Act") enables our shareholders to vote to approve, on an advisory, non-binding basis, the compensation of our named executive officers as disclosed in this Proxy Statement in accordance with the SEC's rules.

Summary

We are asking our shareholders to provide advisory approval of the compensation of our Named Executive Officers, as such compensation is described in the Compensation Discussion and Analysis section, the tabular disclosure regarding such compensation and the accompanying narrative disclosure set forth in this Proxy Statement, beginning on page 24. Our compensation program for our Named Executive Officers is designed to attract, motivate and retain qualified executives with substantive experience in the development, invention, regulatory approval, manufacture, marketing and sale of medical devices. The following is a summary of some of the underlying principles of our Named Executive Officer compensation program. We urge our shareholders to review the Compensation Discussion and Analysis section of this Proxy Statement and executive-related compensation tables for more information.

We pay for performance by rewarding and differentiating among executives based on both overall company performance and individual performance. In addition to the annual variable cash incentive compensation, which is tied to both Company financial goals and individual performance goals, the Compensation Committee considers annual adjustments to compensation levels and short-term and long-term incentive compensation components based on each Named Executive Officer's performance, among other factors.

We believe that our Named Executive Officer compensation program is aligned with our strategic business goals consistent with our corporate values. One element of our compensation program is annual variable cash incentive compensation that provides appropriate incentives for our Named Executive Officers to achieve the goals that are most important to the near- and long-term success of the Company, as measured against specific performance criteria tied to both Company financial goals and individual performa