THORATEC CORP
Form 10-K
February 27, 2008

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UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549
Form 10-K

(Mark one)

þ **ANNUAL REPORT UNDER SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the fiscal year ended December 29, 2007

o **TRANSITION REPORT UNDER SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from to .

Commission file number: 000-49798

Thoratec Corporation

(Exact Name of Registrant as Specified in Its Charter)

California	**94-2340464**
(State or Other Jurisdiction of Incorporation or Organization)	*(I.R.S. Employer Identification No.)*
6035 Stoneridge Drive, Pleasanton, California	**94588**
(Address of Principal Executive Offices)	*(Zip Code)*

Registrant s telephone number, including area code: (925) 847-8600

Securities registered pursuant to Section 12(b) of the Exchange Act:

Title of Each Class	Name of Each Exchange of which Registered
Common Stock, no par value per share	NASDAQ Global Select Market

Securities registered pursuant to Section 12(g) of the Exchange Act: None

Indicate by a check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes o No þ

Indicate by a check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Exchange Act. Yes o No þ

Indicate by a check mark whether the registrant: (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes þ No o

Indicate by a check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant s knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. þ

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 þ	Accelerated filer o	Non-accelerated filer o	Smaller reporting company o

(Do not check if a smaller reporting company)

Indicate by a check mark whether the registrant is a shell company (as defined in Exchange Act Rule 12(b)-2) Yes o No þ

The aggregate market value of the voting stock held by non-affiliates computed by reference to the last sale reported of such stock on June 30, 2007, the last business day of the Registrant s second fiscal quarter, was $819,285,295.

As of January 26, 2008, the Registrant had 54,101,466 shares of common stock outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Designated portions of Thoratec s definitive proxy statement for its 2008 annual meeting of shareholders are incorporated by reference into Part III of this Form 10-K.

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PART I

OVERVIEW

Thoratec Corporation (we, our, us, or the Company) is a world leader in therapies to address advanced heart fail (HF) and point-of-care diagnostics. Our business is comprised of two operating divisions: Cardiovascular and International Technidyne Corporation (ITC), a wholly owned subsidiary.

Incorporated in the State of California in 1976, Thoratec Corporation trades on the NASDAQ Global Select Market under the ticker symbol THOR and is headquartered in Pleasanton, California.

For advanced HF, our Cardiovascular division develops, manufactures and markets proprietary medical devices used for mechanical circulatory support (MCS). Our primary product lines are our ventricular assist devices (VADs): the Thoratec Paracorporeal Ventricular Assist Device (PVAD), the Thoratec Implantable Ventricular Assist Device (IVAD), the HeartMate Left Ventricular Assist System (HeartMate XVE), and the HeartMate II Left Ventricular Assist System (HeartMate II). We refer to the PVAD and the IVAD collectively as the Thoratec product line and we refer to the HeartMate XVE and the HeartMate II collectively as the HeartMate product line. The PVAD, IVAD and the HeartMate XVE are approved by the U.S. Food and Drug Administration (FDA) and CE Mark approved in Europe. The HeartMate II is CE Mark approved in Europe and is in a Phase II pivotal trial in the U.S. In addition, for acute HF we market the CentriMag Blood Pumping System (CentriMag), which is manufactured by Levitronix LLC (Levitronix) and distributed by us in the U.S. under a distribution agreement with Levitronix. We also manufacture a vascular access graft for renal dialysis.

HF is a disorder in which the heart loses its ability to pump blood efficiently. This condition may affect the right side, the left side or both sides of the heart, depriving many organs, including the kidneys and liver, of adequate oxygen and nutrients. This deprivation damages these organs and reduces their ability to function properly. Approximately 23 million people worldwide suffer from HF, with approximately two million new cases of HF diagnosed each year worldwide. In the U.S., according to the American Heart Association (the AHA), nearly five million patients suffer from HF and an additional 550,000 patients are diagnosed with the condition annually. Our VADs provide hemodynamic restoration therapy, which supports the performance of the heart and restores blood flow to adequately meet the needs of vital organs.

Our VADs have been clinically proven to improve patient survival and quality of life. We currently offer the widest range of products to serve this market, including VADs for acute, intermediate and chronic support. Collectively, our MCS devices are FDA-approved for the following indications: bridge-to-transplantation (BTT), long-term support for patients suffering from advanced stage HF who are not eligible for heart transplantation (Destination Therapy or DT), post-cardiotomy myocardial recovery, and support during cardiac surgery. We believe that our long-standing reputation for quality and innovation and our excellent relationships with leading cardiovascular surgeons worldwide position us to capture growth opportunities in the expanding HF market.

We currently market VADs that may be placed inside or outside the body, that can be used for left, right or biventricular support and that are suitable for patients of varying sizes and ages. We estimate that doctors have implanted more than 11,000 of our devices, primarily for patients awaiting a heart transplant or those who require permanent support.

Several private payors have issued positive coverage decisions related to our products. The majority of local Blue Cross and Blue Shield plans cover procedures for both bridge-to-transplantation and long-term therapy indications. In addition, national insurance carriers, including Aetna, Cigna, Humana, United Health Group and UNICARE, have policies covering the use of ventricular assist devices for FDA-approved indications, including Destination Therapy. The Centers for Medicare & Medicaid Services (CMS) covers reimbursement of many of the procedures using our VADs for FDA-approved indications, including reimbursement for the use of a Left Ventricular Assist System for Destination Therapy .

Our ITC division develops, manufactures and markets two product lines: point-of-care diagnostic test systems for hospital point-of-care and alternate site point-of-care markets, including diagnostic test systems that monitor blood coagulation while a patient is being administered certain anticoagulants, and to monitor blood gas/electrolytes, oxygenation and chemistry status; and incision products including devices used to obtain a patient s blood sample for diagnostic testing and screening for platelet function.

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OUR PRODUCTS

Cardiovascular Division

VADs supplement the pumping function of the heart in patients with severe HF. In most cases, a cannula connects the left ventricle of the heart to a blood pump. Blood flows from the left ventricle to the pump chamber via the cannula, powered by an electric or air driven mechanism that drives the blood through another cannula into the aorta. From the aorta, the blood then circulates throughout the body. Mechanical or tissue valves enable unidirectional flow in some devices. Currently, the power source remains outside the body for all FDA-approved VADs.

Certain VADs are implanted internally, while others are placed outside the body. Some external devices are placed immediately adjacent to the body (paracorporeal), while other external VADs are positioned at a distance from the body (extracorporeal).

In addition to our MCS devices, we sell vascular access graft products used in hemodialysis for patients with late-stage renal disease.

Our product portfolio of implantable and external MCS devices and graft products are described below.

The Paracorporeal Ventricular Assist Device

The PVAD is an external, pulsatile, ventricular assist device, FDA approved for BTT, including home discharge, and post-cardiotomy myocardial recovery and provides left, right and biventricular MCS. The PVAD is a paracorporeal device that is less invasive than implantable VADs since only the cannula is implanted. The paracorporeal nature of the PVAD has several benefits including shorter implantation times (approximately two hours) and the ability to use the device in smaller patients.

A pneumatic power source drives the PVAD. It is designed for short-to-intermediate duration use of a few weeks to several months, although this device has supported numerous patients for six to eighteen months. Offering left, right or biventricular support, the PVAD and the IVAD, described below, are the only biventricular support systems approved for use as a BTT and home discharge. This characteristic is significant since approximately 50% of bridge-to-transplant patients treated with the PVAD require right as well as left-sided ventricular assistance. The PVAD is also the only device approved for both bridge-to-transplantation and recovery following cardiac surgery. The PVAD incorporates our proprietary biomaterial, Thoralon, which has excellent tissue and blood compatibility and is resistant to blood clots.

The Implantable Ventricular Assist Device

The IVAD is an implantable, pulsatile, ventricular assist device FDA approved for BTT, including home discharge, and post-cardiotomy myocardial recovery and provides left, right, or biventricular MCS. The IVAD maintains the same blood flow path, valves and blood pumping mechanism as the PVAD, but has an outer housing made of a titanium alloy that makes it suitable for implantation.

We received CE Mark approval to market the IVAD in Europe in July 2003 and FDA approval for the U.S. market in August 2004. The IVAD was approved in Canada in November 2004. The IVAD is currently the only approved implantable VAD that can provide left, right or biventricular support.

The HeartMate XVE

The HeartMate XVE is an implantable, pulsatile, left ventricular assist device for intermediate and longer-term MCS and is the only device approved in the U.S., Europe and Canada for long term support of patients ineligible for heart transplantation. Patients with a HeartMate XVE do not require anticoagulation drugs, other then aspirin, because of the product s incorporation of proprietary textured surfaces and tissue valves. The system is comprised of the blood pump and a wearable controller and batteries providing a high degree of patient freedom and mobility.

The HeartMate VE initially received FDA approval in September 1998 for BTT and in November 2002 for DT. The enhanced version of the product, called the HeartMate XVE, received FDA approval in December 2001 for bridge-to-transplantation. In April 2003, the HeartMate XVE received FDA approval for Destination Therapy.

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The HeartMate II

The HeartMate II is an implantable, electrically powered, continuous flow, left ventricular assist device consisting of a miniature rotary blood pump designed to provide intermediate and long-term MCS. The HeartMate II is designed to improve survival and quality of life and to provide five to ten years of circulatory support for a broad range of advanced heart failure patients. Significantly smaller than the HeartMate XVE and with only one moving part the HeartMate II is simpler and designed to operate more quietly than pulsatile devices. More than 1,150 patients worldwide have been implanted with the HeartMate II as of the end of 2007. In November 2007 the FDA Circulatory System Devices Advisory Panel recommended unanimously that the FDA approve, with conditions, the Pre-Market Approval (PMA) application allowing the use of its HeartMate II as a BTT. In addition, the HeartMate II is in a Phase II pivotal trial in the U.S. for Destination Therapy. The device received CE Mark approval in November 2005, allowing for its commercial sale in Europe.

The CentriMag

The CentriMag, manufactured by Levitronix, is approved to provide MCS for up to six hours for patients suffering from severe, potentially reversible cardiac failure and is based on Levitronix s magnetically levitated bearingless motor technology. We entered into a distribution agreement with Levitronix in August 2006, with an initial term effective through December 2011, to distribute the CentriMag in the U.S. The CentriMag is 510(k) cleared by the FDA for use in patients requiring short-term extracorporeal circulatory support during cardiac surgery and Levitronix has CE Mark approval in Europe to market the product to provide support for up to thirty days. Levitronix is currently in discussion with the FDA regarding an Investigational Device Exemption (IDE) to begin a pivotal trial to demonstrate safety and effectiveness of the CentriMag for longer periods of support.

Vascular Graft Products

The Vectra Vascular Access Graft (*Vectra*) was approved for sale in the U.S. in December 2000 and in Europe in January 1998. It is designed for use as a shunt between an artery and a vein, primarily to provide access to the bloodstream for renal hemodialysis patients requiring frequent needle punctures during treatment.

ITC Division

Our product portfolio of point-of-care diagnostic test systems and incision products includes the following:

Hospital point-of-care

The HEMOCHRON Whole Blood Coagulation System

The HEMOCHRON Whole Blood Coagulation System (HEMOCHRON) is used to quantitatively monitor a patient s coagulation status while the patient is being administered anticoagulants. It may be used in various hospital settings. For instance, it is used in the cardiovascular operating room and cardiac catheterization lab to monitor the drug Heparin, and in an anticoagulation clinic to monitor the drug warfarin. The system consists of a small portable instrument and disposable test cuvettes or tubes and delivers results in minutes.

The IRMA TRUpoint Blood Analysis System

The IRMA TRUpoint Blood Analysis System (IRMA) is used to quantitatively monitor a patient s blood gas, electrolyte and chemistry status. This instrument is a self-contained, portable system which uses disposable test cartridges and delivers results in minutes.

The AVOXimeter Whole Blood Co-Oximeter/Oximeter System

The AVOXimeter Whole Blood Co-Oximeter/Oximeter System (AVOXimeter) is used to assess a patient s oxygenation status and is commonly used in the cardiac catherization lab, the intensive care unit (ICU), the neonatal intensive care unit (NICU) and the emergency department. This portable instrument uses small, single-use test cuvettes and delivers results in less than ten seconds.

Our integrated data management system connects the HEMOCHRON, IRMA and AVOXimeter products.

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Alternate site point-of-care

The ProTime Microcoagulation System

The ProTime Microcoagulation System (ProTime) is designed to safely monitor blood clotting activity in patients on anticoagulation therapy, specifically warfarin. The system can be prescribed for patient use at home or can be used in the physician s office or clinic. The system consists of a portable, quantitative instrument and disposable test cuvettes and delivers results in minutes.

The Hgb Pro Professional Hemoglobin Testing System

The Hgb Pro Professional Hemoglobin Testing System (Hgb Pro) is used by professionals, mainly in the doctor s office, to test for anemia. Hgb Pro delivers quick results from a small blood sample placed on a disposable test strip inserted into a hand-held test meter.

The ProTime and Hgb Pro products are sold into the alternate site non-hospital point-of-care segment of the market comprised of physicians offices, long-term care facilities, clinics, visiting nurse associations and home healthcare companies.

Incision Products

The Tenderfoot Heel Incision Device (Tenderfoot), the Tenderlett Finger Incision Device (Tenderlett) and the Surgicutt Bleeding Time Device (Surgicutt) are used by medical professionals to obtain a patient s blood sample for diagnostic testing. The Tenderfoot is a heel stick used for infant testing, the Tenderlett is used for finger incisions and the Surgicutt is used to perform screening tests to determine platelet function. These devices feature permanently retracting blades for safe incision with minimal pain, as compared to traditional lancets, which puncture the skin.

These products are sold to both the hospital point-of-care and alternate site point-of-care segments of the market. Our products offer certain advantages, command a premium over the competition and are sold in the higher end of the market. Our growth in this segment is limited due to lower priced products competing for the same customers.

PRODUCT SEGMENTS

Our MCS and vascular graft products and services represented 61%, 62% and 62% of our product sales in 2007, 2006, and 2005, respectively. Our point-of-care blood diagnostics test systems and services and incision products represented 39%, 38% and 38% of our total product sales in 2007, 2006, and 2005, respectively. For financial information related to our segments for each of the past three years, please see Item 8, Note 14 to our Consolidated Financial Statements.

OUR MARKETS

Cardiovascular Division

Our VAD products primarily serve patients suffering from advanced stage HF. HF is a chronic disease that occurs when degeneration of the heart muscle reduces the pumping power of the heart, causing the heart to become too weak to pump blood at a level sufficient to meet the body s demands. The condition can be caused by arterial and valvular diseases or a cardiomyopathy, which is a disease of the heart muscle itself. Other conditions, such as high blood pressure or diabetes, also can lead to HF.

According to estimates by the AHA, 5 million people suffer from HF in the U.S. and approximately 550,000 new cases are diagnosed each year. While the number of treatment options for earlier stage HF has increased in recent years, pharmacologic therapies remain the most widely used approach for treatment of HF. These drug therapies include ACE inhibitors, anti-coagulants and beta-blockers, which facilitate blood flow, thin the blood or help the heart work in a more efficient manner. In addition to the use of VADs, other procedures addressing HF include angioplasty, biventricular pacing, valve replacement, bypass and left ventricular reduction surgery.

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Despite attempts to manage HF through drug therapy, the only curative treatment for advanced stages of the disease is heart transplantation. Unfortunately, the number of donor hearts available each year can meet the needs of only a small number of patients who could benefit from transplantation. The United Network for Organ Sharing reported that there were approximately 2,000 hearts available for transplant in the U.S. in 2007. At any given time, approximately 3,000 patients are on the U.S. national transplant waiting list, and we believe a comparable number of patients are waiting in Europe. The median wait time for a donor heart is approximately nine months; many patients have to wait as long as two years.

In the U.S., there are currently two FDA-approved indications for the long-term use of VADs in patients with HF: as a BTT and as Destination Therapy. In addition to the chronic HF markets, MCS devices are also approved for use for acute HF during and following cardiac surgery. All four indications are summarized below.

Bridge-to-Transplantation

VADs provide additional cardiac support for patients with advanced stage HF waiting for a donor heart. Approximately 30% of the patients on the waiting list for a heart transplant in the U.S. receive a VAD. We believe that the percentage of patients bridged to transplant will continue to increase with surgeons level of comfort with the technology, particularly for longer-term support cases. There are currently four devices approved in the U.S. as a bridge-to-transplantation in adults that are commercially marketed, three of which are Thoratec devices.

Destination Therapy

In April 2003, we received approval to market the HeartMate XVE for patients with advanced stage HF who are not candidates for heart transplantation due to other degenerative illnesses or advanced age referred to as Destination Therapy. The National Institutes for Health estimated that the Destination Therapy application represents a market opportunity of up to 100,000 patients in the U.S. For these late-stage HF patients, drug therapy is currently the only other treatment available. With drug therapy, the 12-month survival rate for these patients is approximately 25%. We believe that the HeartMate XVE provides a significant survival benefit for this patient population. We believe that the success in transitioning this market from maximum drug therapy to VADs is partially dependent on the development of our HeartMate product line.

Post-Cardiotomy Myocardial Recovery Following Cardiac Surgery

In addition to chronic HF, our devices are also used for patients who suffer from acute cardiac failure after undergoing cardiac surgery. Some patients have difficulty being weaned off heart/lung machines after surgery, a complication that arises in open-heart procedures. Many of these patients ultimately die from HF when the heart, weakened by disease and the additional trauma of surgery, fails to maintain adequate blood circulation. We believe that only a small portion of this market is currently being treated with VADs and that this patient population could benefit substantially from the use of our FDA-approved PVAD and IVAD products in this market.

Cardiac Surgery Support

In addition to the longer term mechanical circulatory support indications, the CentriMag is approved to provide MCS for periods appropriate to cardiopulmonary bypass and for circulatory support when complete cardiopulmonary bypass is not necessary, for example during valvuloplasty, mitral valve reoperation, surgery of the vena cava or aorta, or liver transplants.

ITC Division

Point-of-Care Diagnostics Products

Our point-of-care blood diagnostic test systems provide fast, accurate blood test results to improve patient management, reduce healthcare costs and improve patient outcomes. These products are sold into the hospital point-of-care segment of the market, into the alternate site point-of-care segment of the market and directly to patients. We believe that the market growth for point-of-care diagnostic products is driven by greater convenience and ease of use for the clinician and patient. In addition, in the case of the ProTime monitoring of oral anticoagulants, clinical studies have shown that more frequent monitoring results in patients staying in their therapeutic range more often. More frequent monitoring is made possible by patients testing themselves at home, in addition to being tested in a doctor s office, when appropriate.

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Incision Products

Our incision products are used by professionals to obtain a patient s blood sample for diagnostic testing. Our incision products are sold into both the hospital point-of-care and the alternate site point-of-care segments of the market. All products feature permanently retracting blades for a safe, less painful incision as compared to traditional lancets, which puncture the skin.

OUR STRATEGY

Our strategy to maintain and expand our leadership position is comprised of the following market and product development activities:

Offer a broad range of products. Our MCS devices provide circulatory support for the heart and have been clinically proven to improve patient survival and quality of life. We currently offer the widest range of MCS devices to cover indications for use ranging from acute to long-term support. We believe that our broad and diverse product offering represents an important competitive advantage because it allows us to address the various preferences of surgeons, the clinical needs of a wide variety of patients, and the economic requirements of third party payors. We intend to further broaden our product line through internal development, acquisition and licensing.

Focus on and partner with leading heart centers. We have developed long-standing relationships with leading cardiovascular surgeons and heart centers worldwide. We believe that no other cardiac assist company enjoys the same depth of relationships and access to these customers. These relationships are an important part of our growth strategy, particularly for the development and introduction of new products and the pursuit of additional indications for our existing products. We continue our investment in building these relationships through cardiology education outreach programs, including those in our Heart Hope Program that we began in 2004. These specialists work in partnership with our VAD centers to increase the awareness of MCS and VADs in the cardiology community.

Increase penetration of existing markets. We plan to treat a greater number and variety of patients within our current customer base. To accomplish this, we are building upon our existing relationships with leading cardiac surgeons in transplant centers and using our existing sales channels to gain acceptance and adoption of our products in the major hospitals that perform open heart surgery.

Destination Therapy market. In April 2003, we received approval to market the HeartMate XVE for Destination Therapy in the treatment of late-stage HF patients who are not candidates for heart transplants. While the initial CMS reimbursement approval is limited to sixty-three centers, we estimate the market penetration for this indication could eventually comprise a meaningful portion of the 100,000 patients diagnosed with late-stage HF, as we introduce new technologies that increase the useful life of our VADs and improve clinical outcomes.

Increase our presence in Cardiovascular and ITC markets. In addition to increasing our presence in the HF, cardiovascular disease, point-of-care and incision markets through internal growth, we continue to evaluate strategic alliances, joint ventures, acquisitions and related business development opportunities.

Acute HF market. In August 2006, we entered into a distribution agreement with Levitronix to distribute the CentriMag in the U.S. This agreement allows us to expand more broadly beyond transplant centers and enables us to better address opportunities in short-term patient recovery. The CentriMag device currently has FDA 510(k) clearance for use in patients requiring short-term extracorporeal circulatory support during cardiac surgery. Levitronix is currently in discussion with the FDA regarding an IDE to begin a pivotal trial to demonstrate safety and effectiveness of the CentriMag for longer periods of support.

Point-of-Care market. In October 2006, we acquired A-VOX Systems, Inc. (Avox), a point-of-care company that developed and manufactured portable, bedside AVOXimeter systems to assist clinicians in assessing a patient s oxygenation status. These systems are used in hospitals in the cardiac catherization lab, the intensive care unit (ICU), the neonatal intensive care unit (NICU) and the emergency department. We sell these systems along with our HEMOCHRON and IRMA point-of-care products and our data management system that connects all of these systems together.

Chronic HF market. In December 2007, we made a nominal investment in Acorn Cardiovascular, Inc., a medical device company that has intellectual property rights to the CorCap™ Cardiac Support Device (CSD), to support patients with heart failure. The CorCap CSD is a mesh wrap that is placed around the heart to support and relieve stress on the heart muscle. The CorCap CSD is intended to improve the heart s size, shape and function. The CorCap CSD received CE Marking in Europe and is in clinical trials in the United States.

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Obtain approval for new products. We began our U.S. Phase II clinical trial for our HeartMate II in the first quarter of 2005 following a successful Phase I trial. The Phase II trial enrolled 133 BTT patients with twenty-six centers participating. In October 2006, we filed the first two modules of the Pre-Market Approval (PMA) application seeking BTT approval for the HeartMate II that addressed all of the supporting engineering and preclinical studies, as well as manufacturing and quality systems. In December 2006, we completed the PMA submission for the BTT arm of the clinical trial. The PMA filing is based on data from 133 BTT patients representing more than fifty-seven years of cumulative support; days of support ranged from 1-568 days. In 2007, we obtained the unanimous recommendation of the FDA Circulatory System Devices Advisory Panel that the FDA would approve, with conditions, the PMA allowing the use of the HeartMate II for BTT. As of December 29, 2007, enrollment in this arm was over 430 patients.

In addition, we have a separate arm of the trial seeking approval for DT. This trial calls for patients randomized to Thoratec s HeartMate XVE on a 2:1 basis. During 2007 we exceeded the initial 200 patient limit and continued to enroll patients through Continued Access Protocol (CAP). The two year follow up on the initial pivotal trial will be completed in May 2009. As of December 29, 2007, we enrolled over 290 patients under the randomized portion of the trial and total enrollment in the DT arm was over 470 patients.

Develop new products. The HeartMate III is a magnetically levitated centrifugal continuous flow pump. The initial design goal for the device was ten years or more of durability in patients with late-stage HF, including DT, BTT and therapeutic recovery. In light of the very positive HeartMate II clinical trial results, beginning the fourth quarter of 2006, we initiated a process to evaluate various options to enhance the clinical utility of HeartMate III compared to HeartMate II. During 2008, we will be redefining the HeartMate III program to focus on these unmet clinical needs.

Increase cost effectiveness of the therapies that employ our products. While a recent study indicates that the cost of implanting a VAD for Destination Therapy is comparable with that of a heart, liver or other major organ transplant, cost remains a significant concern for our customers. In October 2003, CMS issued a favorable National Coverage decision covering reimbursement for the use of left ventricular assist systems that are approved by the FDA for treating Destination Therapy in late-stage HF patients. We work closely with the sixty-three CMS-approved centers to develop the Destination Therapy market, which we believe will ultimately improve the cost effectiveness of this therapy. We also are expanding our market education and training programs, and will continue to make improvements that enhance the performance and cost effectiveness of our products.

SALES AND MARKETING

Mechanical Circulatory Support Products

Hospitals that perform open heart surgery and heart transplants are the potential customers for our MCS products. We estimate that 104 of the approximately 1,000 hospitals in the U.S. that perform open-heart surgery also perform heart transplants. We actively market to heart transplant hospitals and large cardiac surgery centers as well as to the approximately 100 heart transplant hospitals in Europe.

We have recruited and trained, as of December 29, 2007, twenty-three experienced cardiovascular sales specialists who sell our circulatory support systems throughout the world. Our sales force is complemented by twenty-one direct clinical specialists and eleven Market Development Managers. The clinical specialists conduct clinical educational seminars, assist with VAD implants and resolve clinical questions or issues. Our Market Development Managers work with our leading VAD centers to generate referrals and increase awareness in the cardiology community regarding MCS. We partner with universities, experienced clinicians and opinion leaders to assist with expanding clinical educational needs.

In addition to our direct selling efforts, we have a network of international distributors who cover those markets representing the majority of our remaining VAD sales potential. Our sales and marketing tactics include direct mail, education seminars, symposia, equipment purchase and rental programs and journal advertisements, all common in the cardiovascular device market.

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Hospitals and other medical institutions that acquire a VAD system generally purchase VAD pumps, related disposables and training materials, and purchase or rent two of the associated pump drivers (to ensure that a backup driver is available). The time from the initial contact with the cardiac surgeon until purchase is generally between nine and eighteen months, due to the expense of the product and common hospital capital equipment acquisition procedures. Upon receipt of a purchase order, we usually ship the product within thirty days to meet the surgeon s requirements.

The introduction of a VAD system in a hospital or other medical facility requires that the surgical and clinical support personnel possess certain product expertise. We provide initial training and best practice instruction for these personnel, along with a variety of training materials that accompany the initial delivery of our VAD products, including instructions for use, patient management manuals and assorted videos. We provide clinical support during implants and provide twenty-four hour access to clinically trained personnel. In addition, our sales force helps customers understand and manage reimbursement from third-party payors.

Vascular Graft Products

We market the *Vectra* through distributors in the U.S., and selected countries in Europe, the Middle East, Northern Africa and Japan.

Point-of-Care Diagnostics

We currently maintain a direct sales staff of approximately thirty people in the U.S. that sell directly to hospitals. In the alternate site market segment, we have seventeen sales people that sell through national and regional distributors, such as Cardinal Health, Inc., Quality Assured Services, Inc., Physician Sales and Service, Inc. and Caligor, A Henry Schein Company. Outside the U.S., ITC has six salespeople selling principally to third party distributors.

Incision Products

Our incision products are sold worldwide by distributors. In 2007, our largest incision distributor in the U.S. market was Cardinal Healthcare.

COMPETITION

Competition from medical device companies and medical device divisions of health care and pharmaceutical companies is intense and is expected to increase. In our Cardiovascular division, we continue to expect new competitors. In June 2007, Ventracor Limited began a new clinical trial for BTT and DT for its Ventrassist device, and others are expected to begin new clinical trials in the U.S. in 2008. Our incumbent competitors include AbioMed, Inc., Jarvik Heart, Inc., MicroMed Technology, Inc., SynCardia Systems, Inc., and WorldHeart Corporation in the U.S. and Europe and Berlin Heart GmbH in Europe. Principal competitors in the hospital coagulation and blood gas monitoring equipment market include the Cardiac Surgery Division of Medtronic, Inc., the Diagnostic Division of Abbott Laboratories, Instrumentation Laboratory Company and Radiometer A/S. Our primary competitor in the skin incision device market is Becton Dickinson and Company. Competitors in the alternate site point-of-care diagnostics market include Inverness Medical Innovation, Inc. and Roche Diagnostics.

We believe that key competitive factors include the relative speed with which we can develop products, complete clinical testing, receive regulatory approvals, achieve market acceptance and manufacture and sell commercial quantities of our products.

For the BTT and DT indications, we estimate that we have a majority of the VAD market share domestically and internationally. We believe that potential competitors are several years from completion of the clinical trials required before their products will become commercially available and compete with our products in the U.S.

Large medical device companies dominate the markets in which our ITC division competes. We estimate that we hold anywhere from approximately 5% to 60% market share, depending on the product. We expect that our growth in this market will be generated by gaining market share and from a shift of testing from central laboratories to the hospital and alternate site point-of-care. However, this market segment is very competitive, and includes the following potential drivers:

New competitors might enter the market with broader test menus. To address this risk, in the fourth quarter of 2006, we acquired Avox, which has increased our test menu offering, and also offers us the opportunity to develop the next generation system that combines blood gas, electrolyte and oxygenation testing in one machine.

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New drug therapies under development may not require the intense monitoring of a patient s coagulation necessary with the current anticoagulation drug of choice, Heparin. To try to mitigate this risk, we participate in clinical trials with key pharmaceutical companies to provide the hemostasis monitoring that will ultimately be required for new drug therapies.

PATENTS AND PROPRIETARY RIGHTS

We seek to patent certain aspects of our technology. We hold, or have exclusive rights to, several U.S. and foreign patents. Except for the patents mentioned below and one patent pertaining to the TLC-II, our VAD products are not protected by any other patents. We do not believe that this lack of patent protection will have a material adverse effect on our ability to sell our VAD systems because of the lengthy regulatory period required to obtain approval of a VAD. Several patents cover aspects of our HeartMate line of products.

Several patents cover aspects of our proprietary biomaterials technology. Aspects of our blood coagulation, blood gas, blood electrolytes, blood chemistry, and skin incision device products are covered by patents directed to tube-and-micro-coagulation whole blood analysis, including test methods, reagents and integral (on-board) controls, thick film electrochemical analysis of blood gases, blood electrolytes, and blood chemistry, and low trauma skin incision devices for capillary blood sampling, and methods of manufacturing such devices. The duration remaining on some of our biomaterials patents ranges from two to seven years, on our grafts from twelve to fourteen years and on our blood coagulation, blood gas, blood electrolytes, oxygenation, blood chemistry, and skin incision products from one to fifteen years. During the term of our patents, we have the right to prevent third parties from manufacturing, marketing or distributing products that infringe upon our patents.

In addition, we hold several patents on the HeartMate II axial blood flow pump and transcutaneous energy transmission technology, the remaining duration of which ranges from seven to fourteen years. In August 1998, we obtained a license to incorporate technology developed by Sulzer Electronics Ltd. and Lust Antriebstechnik GmbH into the HeartMate III. HeartMate III is a miniature centrifugal pump featuring a magnetically levitated rotor with a bearingless motor that was originally developed by Sulzer and Lust. The license from Sulzer and Lust gives us the exclusive right to use in our HeartMate products technology protected by several U.S. and foreign patents covering implantable bearingless motors for the duration of those patents, subject to our payment of royalties. In December 2000, we were informed by Sulzer Electronics that it had sold all of its business in the bearingless motor and magnetic bearing fields to Levitronix GMBH and had assigned its portion of the agreements between Sulzer and us to Levitronix. We believe that the license remains in full force and effect.

We also hold, or have exclusive rights to, several international patents.

We have developed technical knowledge that, although non-patentable, we consider to be significant in enabling us to compete. It is our policy to enter into confidentiality agreements with each of our employees prohibiting the disclosure of any confidential information or trade secrets. In addition, these agreements provide that any inventions or discoveries by employees relating to our business will be assigned to us and become our sole property.

Despite our patent rights and policies with regard to confidential information, trade secrets and inventions, we may be subject to challenges to the validity of our patents, claims that our products allegedly infringe the patent rights of others and the disclosure of our confidential information or trade secrets. These and other related risks are described more fully under the heading *Our inability to protect our proprietary technologies or an infringement of others patents could harm our competitive positions* in the Risk Factors section of this Annual Report on Form 10-K.

At this time, we are not a party to any material legal proceedings that relate to patents or proprietary rights.

GOVERNMENT REGULATIONS

Regulation by governmental authorities in the United States and foreign countries is a significant factor in the manufacture and marketing of our current and future products and in our ongoing product research and development activities. All of our proposed products will require regulatory approval prior to commercialization. In particular, medical devices are subject to rigorous pre-clinical testing as a condition of approval by the FDA and by similar authorities in foreign countries.

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U.S. Regulations

In the U.S., the FDA regulates the design, manufacture, distribution and promotion of medical devices pursuant to the Federal Food, Drug, and Cosmetic Act and its regulations. Our VAD systems, blood coagulation testing devices, skin incision devices, and *Vectra* graft products are regulated as medical devices. To obtain FDA approval to market VADs similar to those under development, the FDA requires proof of safety and efficacy in human clinical trials performed under an IDE. An IDE application must contain pre-clinical test data supporting the safety of the product for human investigational use, information on manufacturing processes and procedures, proposed clinical protocols and other information. If the IDE application is accepted, human clinical trials may begin. The trials must be conducted in compliance with FDA regulations and with the approval of one or more institutional review boards. The results obtained from these trials, if satisfactory, are accumulated and submitted to the FDA in support of either a PMA application, or a 510(k) premarket notification. There are substantial user fees that must be paid at the time of PMA, PMA Supplement or 510(k) submission to the FDA to help offset the cost of scientific data review that is required before the FDA can determine if the device is approvable.

A PMA Supplement is required to make modifications to a device or application approved by a PMA. A PMA Supplement must be supported by extensive preclinical data, and sometimes human clinical data, to prove the safety and efficacy of the device with respect to the modifications disclosed in the supplement. By regulation, the FDA has 180 days to review a PMA application, during which time an FDA advisory committee of outside experts may be required to evaluate the application and provide recommendations to the FDA. While the FDA has approved PMA applications within the allotted time period, reviews can occur over a significantly protracted period, in some cases up to eighteen months or longer, and a number of devices have never been cleared for marketing. This is a lengthy and expensive process and there can be no assurance that FDA approval will be obtained.

Under the FDA s requirements, if a manufacturer can establish that a newly developed device is substantially equivalent to a legally marketed predicate device, the manufacturer may seek marketing clearance from the FDA to market the device by filing with the FDA a 510(k) premarket notification with the FDA. This is the process that is used to gain FDA market clearance for most of ITC s products. The 510(k) premarket notification must be supported by data establishing the claim of substantial equivalence to the satisfaction of the FDA. The process of obtaining a 510(k) clearance typically can take several months to a year or longer. If substantial equivalence cannot be established, or if the FDA determines that the device should be subjected to a more rigorous review, the FDA will require that the manufacturer submit a PMA application that must be approved by the FDA prior to marketing the device in the U.S.

Both a 510(k) and a PMA, if approved, may include significant limitations on the indicated uses for which a product may be marketed. FDA enforcement policy prohibits the promotion of approved medical devices for unapproved uses. In addition, product approvals can be withdrawn for failure to comply with regulatory requirements or the occurrence of unforeseen problems following initial marketing.

On October 26, 2002, the FDA signed into law The Medical Device User Fee and Modernization Act (MDUFMA) of 2002. On September 28, 2007 MDUFMA was reauthorized for fiscal years 2008-2012. This law amends the FDA Act and regulations to provide, among other things, the ability of the FDA to impose user fees for medical device reviews. Our activities require that we make many filings with the FDA that are subject to this fee structure. Although the precise amount of fees that we will incur each year will be dependent upon the specific quantity and nature of our filings, these fees could be a significant amount per year.

In addition, any products distributed pursuant to the above authorizations are subject to continuing regulation by the FDA. Products must be manufactured in registered establishments and must be manufactured in accordance with Quality System Regulations. Adverse events must be reported to the FDA. Labeling and promotional activities are subject to scrutiny by the FDA and, in certain instances, by the Federal Trade Commission. The FDA often requires post market surveillance (PMS), for significant risk devices, such as VADs, that require ongoing collection of clinical data during commercialization that must be gathered, analyzed and submitted to the FDA periodically for up to several years. These PMS data collection requirements are often burdensome and expensive and have an effect on the PMA approval status. The failure to comply with the FDA s regulations can result in enforcement action, including seizure, injunction, prosecution, civil penalties, recall and/or suspension of FDA approval. The export of devices such

as ours is also subject to regulation in certain instances.

We are also subject to regulation by various state authorities, which may inspect our facilities and manufacturing processes and enforce state regulations. Failure to comply with applicable state regulations may result in seizures, injunctions or other types of enforcement actions.

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International Regulations

We are also subject to regulation in each of the foreign countries where our products are sold. These regulations relate to product standards, packaging and labeling requirements, import restrictions, tariff regulations, duties and tax requirements. Many of the regulations applicable to our products in these countries are similar to those of the FDA. The national health or social security organizations of certain countries require our products to be qualified before they can be marketed in those countries.

In order to be positioned for access to European and other international markets, we sought and obtained certification under the International Standards Organization (ISO) 13485 standards. ISO 13485 is a set of integrated requirements, which when implemented form the foundation and framework for an effective quality management system. These standards were developed and published by the ISO, a worldwide federation of national bodies, founded in Geneva, Switzerland in 1947. ISO has more than 90 member countries and ISO certification is widely regarded as essential to enter Western European markets. We obtained EN ISO 13485:2003 Certification in February 2006. Since 1998, all companies are required to obtain CE Marks for medical devices sold or distributed in the European Union. The CE Mark is an international symbol of quality. With it, medical devices can be distributed within the European Union. A prerequisite for obtaining authority to CE Mark products is to achieve full quality system certification in accordance with ISO 13485 and European Directives, such as the Medical Device Directive (MDD), In-Vitro Device Directive (IVDD) and the Active Implantable Medical Device Directive (AIMD). These are quality standards that cover design, production, installation and servicing of medical devices manufactured by us. We have the ISO 13485 and appropriate MDD, IVDD or AIMD certification and authority to CE Mark all our devices in commercial distribution, including our skin incision devices, blood coagulation testing devices, *Vectra* graft and our VAD systems. We are also certified to be in compliance with the requirements of the Canadian Medical Device Regulations at all Thoratec manufacturing sites, which certification is required to sell medical devices in Canada.

Other Regulations

We are also subject to various federal, state and local laws and regulations relating to such matters as safe working conditions, laboratory and manufacturing practices and the use, handling and disposal of hazardous or potentially hazardous substances used in connection with our research and development work and manufacturing. Specifically, the manufacture of our biomaterials is subject to compliance with federal environmental regulations and by various state and local agencies. Although we believe we are in compliance with these laws and regulations in all material respects, we cannot provide assurance that we will not be required to incur significant costs to comply with environmental laws or regulations in the future.

THIRD PARTY REIMBURSEMENT AND COST CONTAINMENT

Our products are purchased primarily by customers, such as hospitals, who then bill various third party payors for the services provided to the patients. These payors, which include CMS, private health insurance companies and managed care organizations, reimburse part or all of the reasonable costs and fees associated with these devices and the procedures performed with these devices.

To date, CMS and a majority of private insurers with whom we have dealt approved reimbursement for our VADs and our diagnostic and vascular graft products. Effective October 1, 2003, CMS issued a National Coverage Decision Memorandum for the use of the HeartMate XVE for treating Destination Therapy in late-stage HF patients. Sixty-three centers are now recognized by CMS as Medicare DT centers.

Effective October 1, 2007, Medicare reimbursement payment increased for heart assist devices with CMS LVAD centers receiving on average of a 25% increase for implanted LVADs under Medicare Severity Diagnosis Related Groups One (MSDRG1). Twenty-six Healthcare Common Procedure Coding System codes have been created by CMS to provide reimbursement for outpatient equipment and supplies. Since FDA approval of the HeartMate XVE for Destination Therapy, several private payors also have issued positive coverage decisions. In December 2002, Blue Cross/Blue Shield Technology Evaluation Center agreed to cover the use of VADs for Destination Therapy. The majority of local Blue Cross and Blue Shield plans cover procedures for both bridge-to-transplantation and long-term therapy indications. Since December 2002, the majority of national insurance carriers, including Aetna, Cigna, Humana, United Health Group and UNICARE, have policies covering the use of ventricular assist devices for FDA-approved indications, including DT.

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MANUFACTURING

VADs and grafts for the Cardiovascular division are manufactured at our facility located in Pleasanton, California. This facility has been inspected, approved and licensed by the FDA, State of California Department of Health Services Food and Drug Section for the manufacture of medical devices, and has received the ISO 13485:2003 Quality Systems certification. The manufacturing processes consist of utilizing precision components fabricated from a variety of materials and assembling these components into specific configurations governed by the VAD design requirements. During the manufacturing process, the VAD assemblies are rigorously tested to meet rigid operational and quality standards.

The manufacturing process relies on single sources of supply for several of the components used to manufacture VADs. We are working to identify and validate alternate sources of supply for critical components. Where alternate sources are not available, we are working to develop strategic alliances with the supplier and closely manage inventories to assure the on-going supply of product.

The CentriMag product line is manufactured by Levitronix and distributed from our manufacturing facility located in Pleasanton, California.

During 2007, the Cardiovascular division began the expansion of the manufacturing facility located in Pleasanton, California. The main focus of the expansion project is to provide adequate manufacturing capacity to meet the proposed volumes created by the anticipated FDA approval of the HeartMate II product line. When complete, the renovated facility will have the necessary capacity to meet the requirements for our VAD products for the next five to seven years.

Our ITC division blood coagulation testing and skin incision devices are manufactured in Edison, New Jersey, with the exception of the ProTime instrument and the hemoglobin monitor, which are manufactured through single source third party contract manufacturers in China and Germany, respectively. Our blood gas analyzer devices are manufactured in Roseville, Minnesota. The New Jersey and Minnesota facilities have been inspected, approved and licensed by the FDA and applicable state regulators. In addition, these facilities maintain ISO 9001, ISO 13485 and Canadian (CMDCAS) ISO certifications.

A significant amount of our ITC division manufacturing at these facilities is vertically integrated, with only limited reliance on third parties, such as for the manufacture of printed circuit boards and the sterilization and testing of products. We rely on single sources of supply for some components manufactured at our New Jersey and Minnesota facilities, and use safety stocks where there might be risk in qualifying a second supplier in a timely manner.

During 2007, the manufacturing facility for the AVOXimeter was relocated from San Antonio, Texas to ITC s existing facilities in New Jersey. The AVOXimeter relies on third parties for materials and electronic components, some of which have only one supplier. We use safety stocks where there might be a risk in qualifying a second supplier in a timely manner.

Both Cardiovascular and ITC have typically been able to fill orders from inventory and historically have not had significant order backlogs. With the expanded manufacturing capacity for both Cardiovascular and ITC, we will be in a position to accommodate the increased demand for our products. Total backlog as of the end of fiscal 2007 and 2006 was none for both years for our Cardiovascular division, and $2.3 million and $0.2 million, respectively, for our ITC division. At the end of 2007 the increase in order backlog at ITC was due to new customer demand.

RESEARCH AND DEVELOPMENT

Our research and development expenses in 2007, 2006 and 2005 totaled $43.8 million, $39.8 million and $32.3 million, respectively. Research and development costs are largely project driven, and the level of spending depends on the level of project activity planned and subsequently approved and conducted. The primary component of our research and development costs is employee salaries and benefits. Projects related to our Cardiovascular division typically include clinical trials, such as our HeartMate II pivotal trial, efforts to develop new products, such as the HeartMate II and HeartMate III, and efforts to improve the operation and performance of current products, such as efforts to improve the ease of use of our VAD products and the life of various components of our VAD products. ITC research and development projects typically involve developing instruments and disposable test cuvettes or cartridges that will be used at the point-of-care. One such system is the Hemochron Signature Elite, which was introduced in September 2005. In addition, ITC devotes research and development efforts to maintain and improve current products

based on customer feedback. Research and development costs for both divisions also include regulatory and clinical costs associated with our compliance with FDA regulations and clinical trials such as the Phase II HeartMate II pivotal trial.

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MAJOR CUSTOMERS AND FOREIGN SALES

We sell our products primarily to large hospitals and distributors. No customer accounted for more than 10% of total product sales in fiscal year 2007, 2006 and 2005.

Sales originating outside the U.S. and U.S. export sales accounted for approximately 28%, 24% and 23% of our total product sales for fiscal years 2007, 2006 and 2005, respectively. No individual foreign country accounted for more than 10% of our net sales in any of the last three fiscal years.

EMPLOYEES

As of December 29, 2007, we had a total of 1,164 employees, consisting of 1,023 full-time employees and 141 part-time employees. Of our total employees, 1,139 are employed in the U.S. and 25 are employed in the United Kingdom and other European countries. None of our employees are covered by a collective bargaining agreement. We consider relations with our employees to be good.

ADDITIONAL INFORMATION

Additional information about Thoratec is available on our website at http://www.thoratec.com (although none of this information is, or should be deemed to be, incorporated by reference into this Annual Report on Form 10-K). We make filings of our periodic reports to the Securities and Exchange Commission (SEC), including annual reports on Form 10-K, quarterly reports on Form 10-Q and current reports on Form 8-K, as well as amendments to those reports, available free of charge on our website as soon as reasonably practicable following electronic filing of those reports with the SEC.

Item 1A. ***Risk Factors***

Our businesses face many risks. The risks described below are what we believe to be the material risks facing our company, however, they may not be the only risks we face. Additional risks that we do not yet know of or that we currently believe are immaterial may also impair our business operations. If any of the events or circumstances described in the following risk factors actually occur, our business, financial condition or results of operations could suffer, and the trading price of our common stock could decline significantly. Investors should consider the following risks, as well as the other information included in this Annual Report on Form 10-K, and other documents we file from time to time with the SEC, such as our quarterly reports on Form 10-Q, our current reports on Form 8-K and any public announcements we make from time to time.

If we fail to obtain approval from the FDA and from foreign regulatory authorities, we cannot market and sell our products under development in the U.S. and in other countries, and if we fail to adhere to ongoing FDA Quality System Regulations, the FDA may withdraw our market clearance or take other action.

Before we can market new products in the U.S., we must obtain PMA approval or 510(k) clearance from the FDA. This process is lengthy and uncertain. In the U.S., one must obtain clearance from the FDA of a 510(k) pre-market notification or approval of a more extensive submission known as a PMA application. If the FDA concludes that any of our products do not meet the requirements to obtain clearance under Section 510(k) of the Federal Food, Drug, and Cosmetic Act, then we will be required to file a PMA application. The process for a PMA application is lengthy, expensive and typically requires extensive pre-clinical and clinical trial data.

We may not obtain clearance of a 510(k) notification or approval of a PMA application with respect to any of our products on a timely basis, if at all. If we fail to obtain timely clearance or approval for our products, we will not be able to market and sell them, thereby harming our ability to generate sales. The FDA also may limit the claims that we can make about our products. We also may be required to obtain clearance of a 510(k) notification or a PMA Supplement from the FDA before we can market products which have already been cleared, but which have since been modified or we subsequently wish to market for new disease indications.

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The FDA also requires us to adhere to Quality System Regulations, which include production design controls, testing, quality control, and storage and documentation procedures. The FDA may at any time inspect our facilities to determine whether we have adequate compliance. Compliance with Quality System Regulations for medical devices is difficult and costly. In addition, we may not be found compliant as a result of future changes in, or interpretations of, regulations by the FDA or other regulatory agencies. If we do not achieve compliance, the FDA may withdraw marketing clearance, require product recall or take other enforcement action, which in each case would harm our business. Any change or modification to a device is required to be made in compliance with Quality System Regulations, which compliance may cause interruptions or delays in the marketing and sale of our products. The FDA also requires device manufacturers to submit reports regarding deaths, serious injuries and certain malfunctions relating to use of their products.

Sales of our products outside the U.S. are subject to foreign regulatory requirements that vary from country to country. The time required to obtain approvals from foreign countries may be longer or shorter than that required for FDA approval, and requirements for foreign licensing may differ from FDA requirements. In any event, if we fail to obtain the necessary approvals to sell any of our products in a foreign country, or if any obtained approval is revoked or suspended, we will not be able to sell those products there.

The federal, state and foreign laws and regulations regarding the manufacture and sale of our products are subject to future changes, as are administrative interpretations and policies of regulatory agencies. If we fail to comply with applicable federal, state or foreign laws or regulations, we could be subject to enforcement actions. Enforcement actions could include product seizures, recalls, withdrawal of clearances or approvals, and civil and criminal penalties, which in each case would harm our business.

If hospitals do not conduct Destination Therapy procedures using our VADs, market opportunities for our product will be diminished.

The use of certain of our VADs as long-term therapy in patients who are not candidates for heart transplantation (i.e., Destination Therapy patients) was approved by the FDA in 2002, and was approved for reimbursement by CMS in late 2003.

The number of Destination Therapy procedures actually performed depends on many factors, many of which are out of our direct control, including:

- the number of CMS sites approved for Destination Therapy;
- the clinical outcomes of Destination Therapy procedures;
- cardiologists and referring physicians education regarding, and their commitment to, Destination Therapy;
- the economics of the Destination Therapy procedure for individual hospitals, which include the costs of the VAD and related pre- and post-operative procedures and their reimbursement;
- the impact of changes in reimbursement rates on the timing of purchases of VADs for Destination Therapy; and
- the economics for individual hospitals of not conducting a Destination Therapy procedure, including the costs and related reimbursements of long-term hospitalization.

The different outcomes of these and other factors, and their timing, will have a significant impact on our future Cardiovascular product sales.

Physicians may not accept or continue to accept our current products and products under development.

The success of our current and future products will require acceptance or continued acceptance by cardiovascular and vascular surgeons, and other medical professionals. Such acceptance will depend on clinical results and the conclusion by these professionals that our products are safe, cost-effective and acceptable methods of treatment. Even if the safety and efficacy of our future products are established, physicians may elect not to use them for a number of reasons. These reasons could include the high cost of our VAD systems, restrictions on insurance coverage,

unfavorable reimbursement from health care payors, or use of alternative therapies. Also, economic, psychological, ethical and other concerns may limit general acceptance of our ventricular assist, graft and other products.

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We rely on specialized suppliers for certain components and materials in our products and alternative suppliers may not be available.

We depend on a number of custom-designed components and materials supplied by other companies including, in some cases, single source suppliers for components, instruments and materials used in our VAD products and blood testing products. For example, single sources currently manufacture and supply our ProTime and Hemoglobin instruments and the heart valves used in our HeartMate XVE product. The suppliers of our ProTime and Hemoglobin products are located in China and Germany, respectively. We do not have long-term written agreements with most of our vendors and receive components from these vendors on a purchase order basis only. If we need alternative sources for key raw materials or component parts for any reason, such alternative sources may not be available and our inventory may not be sufficient to fill orders before we find alternative suppliers or begin manufacturing these components or materials ourselves. Cessation or interruption of sales of circulatory support products or our point-of-care products may seriously harm our business, financial condition and results of operations.

Alternative suppliers, if available, may not agree to supply us. In addition, FDA approval may be required before using new suppliers or manufacturing our own components or materials which can take additional time to procure. Existing suppliers could also become subject to an FDA enforcement action, which could also disrupt our supplies. If alternative suppliers are not available, we may not have the expertise or resources necessary to produce these materials or component parts internally.

Because of the long product development cycle in our business, suppliers may discontinue components upon which we rely before the end of life of our products. In addition, the timing of the discontinuation may not allow us time to develop and obtain FDA approval for a replacement component before we exhaust our inventory of the legacy component.

If suppliers discontinue components on which we rely, we may have to:

pay premium prices to our suppliers to keep their production lines open or to obtain alternative suppliers;

buy substantial inventory to last through the scheduled end of life of our product, or through such time that we will have a replacement product developed and approved by the FDA; or

stop shipping the product in which the legacy component is used once our inventory of the discontinued component is exhausted.

Any of these interruptions in the supply of our materials could result in substantial reductions in product sales and increases in our production costs.

We may encounter problems manufacturing our products.

We may encounter difficulties manufacturing products in quantities sufficient to meet demand. We do not have experience in manufacturing some of our products in the commercial quantities that might be required if we receive FDA approval of those products and indications currently under development, including the HeartMate II. If we have difficulty manufacturing any of our products, our sales may prove lower than would otherwise be the case and our reputation could be harmed.

Identified quality problems can result in substantial costs and write-downs.

FDA regulations require us to track materials used in the manufacture of our products, so that any problems identified in a finished product can easily be traced back to other finished products containing the defective materials. In some instances, identified quality issues require scrapping or expensive rework of the affected lot(s), not just the tested defective product, and could also require us to stop shipments.

In addition, since some of our products are used in situations where a malfunction can be life threatening, identified quality issues can result in the recall and replacement, generally free of charge, of substantial amounts of product already implanted or otherwise in the marketplace.

Any identified quality issue can therefore both harm our business reputation and result in substantial costs and write-offs, which in either case could materially harm our business and financial results.

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If we fail to successfully introduce new products, our future growth may suffer.

As part of our growth strategy, we intend to develop and introduce a number of new products and product improvements. We also intend to develop new indications for our existing products. For example, we are currently developing updated versions of our HeartMate and point-of-care blood diagnostics products. If we fail to commercialize any of these new products, product improvements and new indications on a timely basis, or if they are not well accepted by the market, our future growth may suffer.

Our inability to protect our proprietary technologies or an infringement of others patents could harm our competitive position.

We rely on patents, trade secrets, copyrights, know-how, trademarks, license agreements and contractual provisions to establish our intellectual property rights and protect our products. These legal means, however, afford only limited protection and may not adequately protect our rights. In addition, we cannot assure you that any of our pending patent applications will issue. The U.S. Patent and Trademark Office may deny or significantly narrow claims made under patent applications and the issued patents, if any, may not provide us with commercial protection. We could incur substantial costs in proceedings before the U.S. Patent and Trademark Office or in any future litigation to enforce our patents in court. These proceedings could result in adverse decisions as to the validity and/or enforceability of our patents. In addition, the laws of some of the countries in which our products are or may be sold may not protect our products and intellectual property to the same extent as U.S. laws, if at all. We may be unable to protect our rights in trade secrets and unpatented proprietary technology in these countries.

Our commercially available VAD products generally are not protected by any patents. We rely principally on trade secret protection and, to a lesser extent, patents to protect our rights to the HeartMate product line. We rely principally on patents to protect our coagulation testing equipment, skin incision devices, HEMOCHRON disposable cuvettes, IRMA analyzer, IRMA disposable cartridges, AVOXimeter and Hgb Pro disposable test strips.

We seek to protect our trade secrets and unpatented proprietary technology, in part, with confidentiality agreements with our employees and consultants. Although it is our policy to require that all employees and consultants sign such agreements, we cannot assure you that every person who gains or has gained access to such information has done or will do so. Moreover, these agreements may be breached and we may not have an adequate remedy.

Our products may be found to infringe prior or future patents owned by others. We may need to acquire licenses under patents belonging to others for technology potentially useful or necessary, and such licenses may not be available to us. We could incur substantial costs in defending suits brought against us on such patents or in bringing suits to protect our patents or patents licensed by us against infringement.

Our future Cardiovascular product sales will be affected by the number of heart transplants conducted.

A significant amount of our product sales are generated by our VADs implanted temporarily in patients awaiting heart transplants. The number of heart transplants conducted worldwide depends on the number of hearts available to transplant.

Our future disposable cuvette test product sales by ITC could be affected by changes in monitoring requirements for medical procedures.

ITC product sales are generated by medical procedures that require monitoring of coagulation and blood gas parameters done in cardiovascular operating rooms and cardiac catheterization labs. The sales of our disposable test products could decline if there were a significant reduction in those medical procedures.

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Since we depend upon distributors, if we lose a distributor or a distributor fails to perform, our operations may be harmed.

With the exception of Canada and the larger countries in Europe, we sell our Thoratec and HeartMate product lines in foreign markets through distributors. In addition, we sell our vascular access graft products through the Bard Peripheral Vascular division of C.R. Bard Corporation (which is also a competitor of ours) in the U.S. and selected countries in Europe, the Middle East and Africa, and through Goodman Co. Ltd. in Japan. Substantially all of the international operations and a large portion of the alternate site domestic operations of ITC are conducted through distributors. For the year ended December 29, 2007, 64% of ITC s total product sales were through distributors.

To the extent we rely on distributors, our success will depend upon the efforts of others, over whom we may have little or no control. If we lose a distributor or a distributor fails to perform to our expectations, our product sales may be harmed.

If we fail to compete successfully against our existing or potential competitors, our product sales or operating results may be harmed.

Competition from medical device companies and medical device divisions of health care and pharmaceutical companies is intense and is expected to increase. In our Cardiovascular division, we continue to expect new competitors. In June 2007, Ventracor Limited began a new clinical trial for BTT and DT for its Ventrassist device, and others are expected to begin new clinical trials in the U.S. in 2008. Our incumbent competitors include AbioMed, Inc., Jarvik Heart, Inc., MicroMed Technology, Inc., SynCardia Systems, Inc., and WorldHeart Corporation in the U.S. and Europe and Berlin Heart GmbH in Europe. Principal competitors in the hospital coagulation and blood gas monitoring equipment market include the Cardiac Surgery Division of Medtronic, Inc., the Diagnostic Division of Abbott Laboratories, Instrumentation Laboratory Company and Radiometer A/S. Our primary competitor in the skin incision device market is Becton Dickinson and Company. Competitors in the alternate site point-of-care diagnostics market include Inverness Medical Innovation, Inc. and Roche Diagnostics.

Some of our competitors, especially those of our ITC division, have substantially greater financial, technical, distribution, marketing and manufacturing resources, while other competitors have different technologies that may achieve broader customer acceptance or better cost structures than our products. Accordingly, our competitors may be able to develop, manufacture and market products more efficiently, at a lower cost and with more market acceptance than we can. In addition, new drugs or other devices may reduce the need for VADs. We expect that the key competitive factors will include the relative speed with which we can:

develop products;

complete clinical testing;

receive regulatory approvals;

achieve market acceptance; and

manufacture and sell commercial quantities of products.

Large medical device companies dominate the markets in which ITC competes. We expect that any growth in this market will come from expanding our market share at the expense of other companies and from testing being shifted away from central laboratories to the hospital and alternate site point-of-care. However, this market segment is very competitive and includes the following potential drivers:

New drug therapies under development may not require the intense monitoring of a patient s coagulation that the current anti-coagulation drug of choice (Heparin) requires.

New competitors might enter the market with broader test menus.

Any of the devices of our competitors in clinical trials and in development could prove to be clinically superior, easier to implant, and/or less expensive than current commercialized devices, thereby impacting Thoratec s market share.

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Our non-U.S. sales present special risks.

A substantial portion of our total sales occurs outside the U.S. We anticipate that sales outside the U.S. and U.S. export sales will continue to account for a significant percentage of our product sales and we intend to continue to expand our presence in international markets. Non-U.S. sales are subject to a number of special risks. For example:

- we sell some of our products at a lower price outside the U.S.;
- sales agreements may be difficult to enforce;
- receivables may be difficult to collect through a foreign country s legal system;
- foreign customers may have longer payment cycles;
- foreign countries may impose additional withholding taxes or otherwise tax our foreign income, impose tariffs or adopt other restrictions on foreign trade;
- U.S. export licenses may be difficult to obtain;
- intellectual property rights may be (and often are) more difficult to enforce in foreign countries;
- terrorist activity or war may interrupt distribution channels or adversely impact our customers or employees; and
- fluctuations in exchange rates may affect product demand and adversely affect the profitability, in U.S. dollars, of products sold in foreign markets where payments are made in local currencies.

Any of these events could harm our operations or financial results.

Fluctuations in foreign currency exchange rates could result in declines in our reported sales and earnings.

Because some of our international sales are denominated in local currencies and not in U.S. dollars, our reported sales and earnings are subject to fluctuations in foreign currency exchange rates. At present, we use forward foreign currency contracts to hedge the gains and losses created by the re-measurement of non-functional currency denominated assets and liabilities. However, we do not hedge foreign currency exposures that will arise from future sales. As a result, sales occurring in the future that are denominated in foreign currencies may be translated into U.S. dollars at a less favorable rate than our current exchange rate environment resulting in reduced revenues and earnings.

The long and variable sales and deployment cycles for our VAD systems may cause our product sales and operating results to vary significantly, which increases the risk of an operating loss for any given fiscal period.

Our VAD systems have lengthy sales cycles and we may incur substantial sales and marketing expenses and expend significant effort without making a sale. Even after making the decision to purchase our VAD systems, our customers often deploy our products slowly. For example, the length of time between initial contact with cardiac surgeons and the purchase of our VAD systems is generally between nine and eighteen months. In addition, cardiac centers that buy the majority of our products are usually led by cardiac surgeons who are heavily recruited by competing centers or by centers looking to increase their profiles. When one of these surgeons moves to a new center we sometimes experience a temporary but significant reduction in purchases by the departed center while it replaces its lead surgeon. As a result, it is difficult for us to predict the quarter in which customers may purchase our VAD systems and our product sales and operating results may vary significantly from quarter to quarter, which increases the risk of an operating loss for us for any given quarter. In particular, sales of our VADs for Destination Therapy have been lower than we had originally anticipated, and we cannot predict when, if ever, sales of our VADs for this indication will generate the level of revenues expected.

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Since our physician and hospital customers depend on third party reimbursement, if third party payors fail to provide appropriate levels of reimbursement for our products, our results of operations will be harmed.

Significant uncertainty exists as to the reimbursement status of newly approved health care products such as VADs and vascular grafts. This uncertainty could delay or prevent adoption by hospitals of these products in volume. Government and other third party payors are increasingly attempting to contain health care costs. Payors are attempting to contain costs by, for example, limiting coverage and the level of reimbursement of new therapeutic products. Payors are also attempting to contain costs by refusing, in some cases, to provide any coverage for uses of approved products for disease indications other than those for which the FDA has granted marketing approval.

To date, a majority of private insurers with whom we have been involved and the CMS have determined to reimburse some portion of the cost of our VADs and our diagnostic and vascular graft products, but we cannot estimate what portion of such costs will be reimbursed, and our products may not continue to be approved for reimbursement. In addition, changes in the health care system may affect the reimbursability of future products. If coverage were partially or completely reduced, our revenues and results of operations would be harmed.

Our debt obligations expose us to risks that could adversely affect our business, operating results and financial condition.

We have a substantial level of debt in the form of our senior subordinated convertible notes. The terms of our senior subordinated convertible notes do not restrict our ability to incur additional indebtedness, including indebtedness senior to the convertible notes. The level of our indebtedness, among other things, could:

make it difficult for us to make payments on our debt;

make it difficult for us to obtain any necessary financing in the future for working capital, capital expenditures, debt service, acquisitions or general corporate purposes;

limit our flexibility in planning for or reacting to changes in our business;

reduce funds available for use in our operations;

make us more vulnerable in the event of a downturn in our business or an increase in interest rates;

impair our ability to incur additional debt because of financial and other restrictive covenants proposed for any such additional debt; or

place us at a possible competitive disadvantage relative to less leveraged competitors and competitors that have better access to capital resources.

If we experience a decline in product sales due to any of the factors described in this Risk Factors section or otherwise, we could have difficulty paying interest or principal amounts due on our indebtedness. If we are unable to generate sufficient cash flow or otherwise obtain funds necessary to make required payments, or if we fail to comply with the various requirements of our indebtedness, including the convertible notes, we would be in default, which would permit the holders of our indebtedness to accelerate the maturity of the indebtedness and could cause defaults under our other indebtedness. Any default under our indebtedness could have a material adverse effect on our business, operating results and financial condition.

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We may be unable to repay or repurchase our senior subordinated convertible notes or our other indebtedness.

At maturity, the entire outstanding principal amount of our senior subordinated convertible notes will become due and payable. Holders of the convertible notes may also require us to repurchase the convertible notes on May 16 in each of 2011, 2014, 2019, 2024 and 2029. In addition, if certain fundamental changes to our company occur, the holders of the convertible notes may require us to repurchase all or any portion of their convertible notes. We may not have sufficient funds or may be unable to arrange for additional financing to pay the principal amount due at maturity or the repurchase price of the convertible notes. Any such failure would constitute an event of default under the indenture for the senior subordinated convertible notes, which could, in turn, constitute a default under the terms of any other indebtedness we may have incurred. Any default under our indebtedness could have a material adverse effect on our business, operating results and financial condition.

Conversion of the senior subordinated convertible notes or other future issuances of our stock will dilute the ownership interests of existing shareholders.

The conversion of some or all of the senior subordinated convertible notes will dilute the ownership interest of our existing shareholders. Any sales in the public market of the common stock issuable upon such conversion could adversely affect prevailing market prices of our common stock. Further, the existence of the convertible notes may encourage short selling of our common stock by market participants because the conversion of the convertible notes could depress the price of our common stock. In addition, future sales of substantial amounts of our stock in the public market, or the perception that such sales could occur, could adversely affect the market price of our stock. Sales of our shares and the potential for such sales could cause our stock price to decline.

Our adoption of Emerging Issues Task Force (EITF) Issue No. 04-8 in 2004, requires the inclusion of shares available upon conversion of our convertible notes in calculating our diluted earnings per share (EPS), regardless of whether the notes are then convertible. The shares included in our EPS due to EITF 04-8 did not impact our consolidated results for the periods in which the notes were outstanding as the effect of the 7.3 million shares was anti-dilutive as of the years ended 2007, 2006 and 2005. However, if in future periods the shares are dilutive, then 7.3 million shares will be added to our share count used to calculate diluted earnings per share, and this inclusion could result in significantly lower diluted EPS.

Amortization of our intangible assets, which represent a significant portion of our total assets, will adversely affect our net income and we may never realize the full value of our intangible assets.

A substantial portion of our assets is comprised of goodwill and purchased intangible assets, recorded as a result of our merger with Thermo Cardiosystems, Inc. (TCA) in 2001. We may not receive the recorded value for our intangible assets if we sell or liquidate our business or assets. The material concentration of intangible assets increases the risk of a large charge to earnings if recoverability of these intangible assets is impaired. For example, in the first quarter of 2004, we completed an assessment of the final results from the feasibility clinical trial for the Aria CABG graft, which was ongoing through fiscal 2003. Based on the clinical trial results, we decided not to devote additional resources to development of the Aria graft. Upon the decision to discontinue product development, we recorded an impairment charge of approximately $9 million as of January 3, 2004 to write off purchased intangible assets related to the Aria graft. In the event of another such charge to net income, the market price of our common stock could be adversely affected.

Product liability claims could damage our reputation and hurt our financial results.

Our business exposes us to an inherent risk of potential product liability claims related to the manufacturing, marketing and sale of medical devices. We maintain a limited amount of product liability insurance. Our insurance policies generally must be renewed on an annual basis. We may not be able to maintain or increase such insurance on acceptable terms or at reasonable costs, and such insurance may not provide us with adequate coverage against all potential liabilities. A successful claim brought against us in excess, or outside, of our insurance coverage could seriously harm our financial condition and results of operations. Claims against us, regardless of their merit or potential outcome, may also reduce our ability to obtain physician acceptance of our products or expand our business.

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The competition for qualified personnel is particularly intense in our industry. If we are unable to retain or hire key personnel, we may not be able to sustain or grow our business.

Our ability to operate successfully and manage our potential future growth depends significantly upon retaining key research, technical, clinical, regulatory, sales, marketing, managerial and financial personnel, and attracting and retaining additional highly qualified personnel in these areas. We face intense competition for such personnel, and we may not be able to attract and retain these individuals. We compete for talent with numerous companies, as well as universities and nonprofit research organizations, throughout all our locations. The loss of key personnel for any reason or our inability to hire and retain additional qualified personnel in the future could prevent us from sustaining or growing our business. Our success will depend in large part on the continued services of our research, managerial and manufacturing personnel. We cannot assure you that we will continue to be able to attract and retain sufficient qualified personnel.

The price of our common stock may fluctuate significantly.

The price of our common stock has been, and is likely to continue to be, volatile, which means that it could decline substantially within a short period of time. For example, our closing stock price ranged from $17.36 to $21.68 during the twelve months ended December 29, 2007. The price of our common stock could fluctuate significantly for many reasons, including the following:

future announcements concerning us or our competitors;

regulatory developments, enforcement actions bearing on advertising, marketing or sales, and disclosure regarding completed/ ongoing or future clinical trials;

quarterly variations in operating results, which we have experienced in the past and expect to experience in the future;

introduction of new products or changes in product pricing policies by us or our competitors;

acquisition or loss of significant customers, distributors or suppliers;

reaction to estimates of business operations, product development or financial performance made public by our management;

business acquisitions or divestitures;

changes in earnings estimates by analysts;

changes in third party reimbursement practices;

charges, amortization and other financial effects relating to our merger with TCA; and

fluctuations in the economy, world political events or general market conditions.

In addition, stock markets in general and the market for shares of health care stocks in particular, have experienced extreme price and volume fluctuations in recent years, fluctuations that frequently have been unrelated to the operating performance of the affected companies. These broad market fluctuations may adversely affect the market price of our common stock. The market price of our common stock could decline below its current price and the market price of our stock may fluctuate significantly in the future. These fluctuations may be unrelated to our performance.

Shareholders often have instituted securities class action litigation after periods of volatility in the market price of a company s securities. Securities class action suits have been filed against us in the past, and if other such suits are filed against us in the future we may incur substantial legal fees and our management s attention and resources may be

diverted from operating our business in order to respond to the litigation.

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If we make acquisitions or divestitures, we could encounter difficulties that harm our business.

We may acquire companies, products or technologies that we believe to be complementary to our business. If we do so, we may have difficulty integrating the acquired personnel, operations, products or technologies and we may not realize the expected benefits of any such acquisition. In addition, acquisitions may dilute our earnings per share, disrupt our ongoing business, distract our management and employees and increase our expenses, any of which could harm our business. We may also sell businesses or assets as part of our strategy or if we receive offers from third parties. If we do so, we may sell an asset or business for less than its carrying value.

The occurrence of a catastrophic disaster or other similar events could cause damage to our facilities and equipment, which would require us to cease or curtail operations.

We are vulnerable to damage from various types of disasters, including earthquake, fire, terrorist acts, flood, power loss, communications failures and similar events. For example, in October 1989, a major earthquake that caused significant property damage and a number of fatalities struck near the area in which our Pleasanton, California facility is located. If any such disaster were to occur, we may not be able to operate our business at our facilities, in particular because our premises require FDA approval, which could result in significant delays before we can manufacture products from a replacement facility. The insurance we maintain may not be adequate to cover our losses resulting from disasters or other business interruptions. Therefore, any such catastrophe could seriously harm our business and results of operations.

We have a history of net losses.

We were founded in 1976 and we have had some history of incurring losses from operations. We anticipate that our expenses will increase as a result of increased pre-clinical and clinical testing, research and development and selling, general and administrative expenses. We could also incur significant additional costs in connection with our business development activities and the development and marketing of new products and indicated uses for our existing products, as well as litigation and share-based compensation costs. Such costs could prevent us from maintaining profitability in future periods.

We have experienced rapid growth and changes in our business, and our failure to manage this and any future growth could harm our business.

The number of our employees has substantially increased during the past several years. We expect to continue to increase the number of our employees, and our business may suffer if we do not manage and train our new employees effectively. Our product sales may not continue to grow at a rate sufficient to support the costs associated with an increasing number of employees. Any future periods of rapid growth may place significant strains on our managerial, financial and other resources. The rate of any future expansion, in combination with our complex technologies and products, may demand an unusually high level of managerial effectiveness in anticipating, planning, coordinating and meeting our operational needs, as well as the needs of our customers.

Revisions to accounting standards, financial reporting and corporate governance requirements and tax laws could result in changes to our standard practices and could require a significant expenditure of time, attention and resources, especially by senior management.

We must follow accounting standards, financial reporting and corporate governance requirements and tax laws set by the governing bodies and lawmakers in the U.S. and U.K. where we do business. From time to time, these governing bodies and lawmakers implement new and revised rules and laws. These new and revised accounting standards, financial reporting and corporate governance requirements and tax laws may require changes to our financial statements, the composition of our board of directors, the responsibility and manner of operation of various board-level committees, the information filed by us with the governing bodies and enforcement of tax laws, against us. Implementing changes required by new standards, requirements or laws likely will require a significant expenditure of time, attention and resources. It is impossible to completely predict the impact, if any, on us of future changes to accounting standards, financial reporting and corporate governance requirements and tax laws.

Our accounting principles that recently have been or may be affected by changes in the accounting principles are as follows:

accounting for stock-based compensation;

fair value measurement;

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accounting for income taxes; and

accounting for business combinations and related goodwill.

It is possible that the application of certain current accounting standards may change which may have a material impact on our consolidated results of operations.

We are subject to taxation in a number of jurisdictions and changes to the corporate tax rate and laws of any of these jurisdictions could increase the amount of corporate taxes we have to pay.

We pay taxes principally in the U.S., U.K., Germany and France and these tax jurisdictions have in the past and may in the future make changes to their corporate tax rates and other tax laws, which changes could increase our future tax obligations.

Unanticipated changes in our tax rates could affect our future results of operations. Our future effective tax rates could be unfavorably affected by changes in tax laws or the interpretation of tax laws, by unanticipated decreases in the amount of revenue or earnings in states with low statutory tax rates, or by changes in the valuation of our deferred tax assets and liabilities. In addition, we are subject to the continual examination of our income tax returns by the Internal Revenue Service and other domestic and foreign tax authorities, primarily related to our intercompany transfer pricing. We regularly assess the likelihood of outcomes resulting from these examinations to determine the adequacy of our provision for income taxes and our reserves for potential adjustments. We believe such estimates to be reasonable; however, there can be no assurance that the final determination of any of these examinations will not have an adverse effect on our operating results and financial position.

Future levels of research and development spending, capital investment and export sales may impact our entitlement to related tax credits and benefits which have the effect of lowering our tax rate.

Any claims relating to improper handling, storage or disposal of hazardous chemicals and biomaterials could be time consuming and costly.

Manufacturing and research and development of our products requires the use of hazardous materials, including chemicals and biomaterials. We cannot eliminate the risk of accidental contamination or discharge and any resultant injury from these materials.

We could be subject to both criminal liability and civil damages in the event of an improper or unauthorized release of, or exposure of individuals to, hazardous materials. In addition, claimants may sue us for injury or contamination that results from our use or the use by third parties of these materials, and our liability may exceed our total assets. Compliance with environmental laws and regulations is expensive, and current or future environmental regulations may impair our research, development or production efforts or harm our operating results.

Anti-takeover defenses in our governing documents could prevent an acquisition of our company or limit the price that investors might be willing to pay for our common stock.

Our governing documents could make it difficult for another company to acquire control of our company. For example:

Our Articles of Incorporation allow our Board of Directors to issue, at any time and without shareholder approval, preferred stock with such terms as it may determine. No shares of preferred stock are currently outstanding. However, the rights of holders of any of our preferred stock that may be issued in the future may be superior to the rights of holders of our common stock.

We have a rights plan, commonly known as a poison pill, which would make it difficult for someone to acquire us without the approval of our Board of Directors.

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All or any one of these factors could limit the price that certain investors would be willing to pay for shares of our common stock and could delay, prevent or allow our Board of Directors to resist an acquisition of our company, even if the proposed transaction was favored by a majority of our independent shareholders.

Item 1B. ***Unresolved Staff Comments***

None.

Item 2. ***Properties***

We are headquartered in Pleasanton, California, where we own an approximately 67,000 square-foot building that is Thoratec s corporate office building. We also own approximately 66,000 square feet of office, manufacturing and research facilities in Edison, New Jersey.

Additionally, we lease the following facilities:

Approximately 62,000 square feet of office, manufacturing and research facilities in Pleasanton, California, expiring in 2011.

Approximately 6,400 square feet of warehouse space in Dublin, California, expiring in 2011.

Approximately 11,000 square feet of office and research facilities in Rancho Cordova, California, expiring in 2008.

Approximately 45,000 square feet of office, manufacturing, warehouse and research facilities in Edison, New Jersey, expiring through 2017.

Approximately 38,000 square feet of office and research facilities in Piscataway, New Jersey, expiring in 2014.

Approximately 35,000 square feet of office, manufacturing and research facilities in Roseville, Minnesota, expiring in 2008.

Approximately 39,000 square feet of office and research facilities in Burlington, Massachusetts, expiring in 2011.

Approximately 8,700 square feet of office and warehouse facilities in the United Kingdom expiring in 2022.

Each of our manufacturing areas has been inspected, approved and licensed for the manufacture of medical devices by the FDA. Additionally, the Pleasanton facility is subject to inspections, approvals and licensing by the State of California Department of Health Services (Food and Drug Section). The Edison facility is subject to inspections, approvals and licensing by the State of New Jersey Department of Health.

The Cardiovascular division utilizes all of the facilities in California, Massachusetts and in the United Kingdom. The ITC segment utilizes all of the facilities in New Jersey and Minnesota.

Item 3. ***Legal Proceedings***

None.

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Item 4. ***Submission of Matters to a Vote of Security Holders***

No matters were submitted to a vote of security holders during the quarter ended December 29, 2007.

Our Executive Officers

Gerhard F. Burbach, 46, President, Chief Executive Officer and Director, joined our company as President, Chief Executive Officer and a director, in January 2006. Prior to joining us, Mr. Burbach served as the President and Chief Executive Officer of Digirad Corporation, a leading provider of solid-stage imaging products and services to cardiologist offices, hospitals and imaging centers. He continues to serve on the Digirad board of directors. 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. He also spent six years with the consulting firm of McKinsey & Company, primarily within the firm s healthcare practice.

David V. Smith, 48, Executive Vice President and Chief Financial Officer, joined our company on December 29, 2006 as Executive Vice President and Chief Financial Officer. Prior to joining us, Mr. Smith was Vice President, Chief Financial Officer of Chiron Corporation, a global pharmaceutical company, from April 2003 until April 2006. Mr. Smith served as Chiron s Vice President, Finance from February 2002 until April 2003 and as Chiron s Vice President and Principal Accounting Officer from February 1999 until February 2002. Mr. Smith served as the Vice President, Finance and Chief Financial Officer of Anergen, Inc. from 1997 until he joined Chiron. From 1988 to 1997, Mr. Smith held various financial management positions with Genentech, Inc., in both the United States and Europe. Mr. Smith is a member of the Board of Directors and Chair of the Audit Committee of Perlegen Sciences, Inc.

Lawrence Cohen, 58, President of ITC, joined our company in May 2001 as President of ITC. Prior to joining ITC, Mr. Cohen served as CEO of HemoSense, Inc., a developer of medical diagnostic products, from August 1998 to April 2001. From October 1989 to March 1998, Mr. Cohen held the positions of Vice President Marketing and Sales, Vice President International and Worldwide Executive Vice President at Ortho-Clinical Diagnostics, a Johnson & Johnson company. From 1980 to 1989, Mr. Cohen held executive management positions at Instrumentation Laboratory and Beckman Coulter Corporation. He is a past president of the Biomedical Marketing Association and was on the Board of Trustees of the National Blood Foundation from 1998 to 2004.

David A. Lehman, 47, Senior Vice President, General Counsel and Secretary, joined our company as Vice President and General Counsel in May 2003. Mr. Lehman was appointed as Secretary in December 2004 and became Senior Vice President in February 2007. Prior to joining us, Mr. Lehman served as Vice President and General Counsel of Brigade Corporation, a provider of business process outsourcing services, from June 2000 to May 2003. From November 1997 to June 2000, Mr. Lehman was Assistant General Counsel at Bio-Rad Laboratories, Inc., a diagnostic and life science products company. Prior to November 1997, Mr. Lehman was in the legal department of Mitsubishi International Corporation, in New York and Tokyo, for more than seven years. Mr. Lehman started his career as an associate attorney at the law firm of Hall, Dickler, Kent, Friedman and Wood.

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PART II

Item 5. ***Market for Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities***

Our common stock is traded on the NASDAQ Global Select Market under the symbol THOR. The following table sets forth, for the periods indicated, the high and low closing sales price per share of our common stock, as reported by the NASDAQ Global Select Market. As of January 26, 2008, there were 54,101,466 shares of our common stock outstanding with approximately 650 holders of record, including multiple beneficial holders at depositories, banks, and brokerages listed as a single holder in the street name of each respective depository, bank or broker.

	High	Low
Fiscal Year 2006		
First Quarter	$25.30	$18.56
Second Quarter	18.93	12.21
Third Quarter	15.65	11.79
Fourth Quarter	17.76	14.69
Fiscal Year 2007		
First Quarter	$21.17	$17.44
Second Quarter	21.68	17.36
Third Quarter	21.02	18.67
Fourth Quarter	21.25	17.60

We have not declared or paid any dividends on our common stock and we do not anticipate doing so in the foreseeable future.

There were no unregistered sales of our equity securities during the three months ended December 29, 2007.

Stock Price Performance Graph

The graph below compares the cumulative total shareholder return on an investment in our common stock, the NASDAQ Stock Market Index (U.S. companies only) and the NASDAQ Medical Equipment Index for the five-year period ended December 28, 2007, the last trading day in our 2007 fiscal year.

The graph assumes the value of an investment in our common stock and each index was $100 at December 31, 2002 and the reinvestment of all dividends, if any.

COMPARISON OF 5 YEAR CUMULATIVE TOTAL RETURN*
Among Thoratec Corporation, The NASDAQ Composite Index
And The NASDAQ Medical Equipment Index

* $100 invested on 12/31/02 in stock or index-including reinvestment of dividends.
Fiscal year ending December 31.

	12/02	12/03	12/04	12/05	12/06	12/07
Thoratec Corporation	100.00	169.46	136.57	271.17	230.41	238.40
NASDAQ Composite	100.00	149.75	164.64	168.60	187.83	205.22
NASDAQ Medical Equipment	100.00	151.86	183.56	210.66	217.12	285.24

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Issuer Purchases of Equity Securities

The following table sets forth certain information about our common stock repurchased during the three months ended December 29, 2007:

	Total number of shares purchased	Average price paid per share	Total number of shares purchased under publicly announced programs (1)	Approximate value of shares authorized to be purchased under publicly announced programs
		(in thousands, except per share data)		
September 30, 2007 through October 27, 2007	1.5	$ 20.53		$
October 28, 2007 through November 24, 2007	2.4	19.13		
November 25, 2007 through December 29, 2007	3.3	18.18		
Total	7.2(2)	$ 18.98		$

(1) Our share repurchase programs, which authorized us to repurchase up to a total of $130 million of the Company s common shares, were announced on February 11, 2004 as a $25 million program, on May 12, 2004 as a $60 million program, on July 29, 2004 as a $25 million program and on February 2, 2006 as a

$20 million program. These programs authorize us to acquire shares in the open market or in privately negotiated transactions and do not have an expiration date. No shares were repurchased under these programs during the three months ended December 29, 2007.

(2) Shares purchased that were not part of our publicly announced repurchase programs represent the surrender value of shares of restricted stock used to pay income taxes due upon vesting, and do not reduce the dollar value that may yet be purchased under our publicly announced repurchase programs.

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Item 6. ***Selected Consolidated Financial Data***

The selected consolidated financial data presented below for the five fiscal years ended December 29, 2007 are derived from our audited financial statements. The data set forth below should be read in conjunction with Management s Discussion and Analysis of Financial Condition and Results of Operations below and our audited consolidated financial statements and notes thereto appearing elsewhere in this Annual Report on Form 10-K.

Our fiscal year ends on the Saturday closest to December 31. Accordingly, our fiscal year will periodically contain more or less than 365 days. For example, fiscal 2003 ended January 3, 2004, fiscal 2004 ended January 1, 2005, fiscal 2005 ended December 31, 2005, fiscal 2006 ended December 30, 2006 and fiscal 2007 ended December 29, 2007. Fiscal 2008 of 53 weeks will end on January 3, 2009.

	Fiscal Year				
	2007[1]	2006[1]	2005	2004	2003
	(In thousands, except per share data)				
Statement of Operations:					
Product sales	$234,780	$214,133	$201,712	$172,341	$149,916
Gross profit	136,264	125,485	123,340	100,222	88,748
Amortization of goodwill and purchased intangible assets	12,582	12,055	11,204	11,724	12,333
In-process research and development		1,120			220
Impairment of intangible asset					8,987
Litigation, merger, restructuring and other costs		447	95	733	2,132
Net income (loss)	$ 3,235	$ 3,973	$ 13,198	$ 3,564	$ (2,182)
Basic net income (loss) per share	$ 0.06	$ 0.08	$ 0.27	$ 0.07	$ (0.04)
Diluted net income (loss) per share	$ 0.06	$ 0.07	$ 0.26	$ 0.07	$ (0.04)
Balance Sheet Data:					
Cash and cash equivalents and short term available-for-sale investments	$218,350	$194,478	$210,936	$145,859	$ 62,020
Working capital	301,736	265,691	269,293	206,250	116,430
Total assets	613,719	591,135	573,918	518,034	471,335
Subordinated convertible debentures	143,750	143,750	143,750	143,750	
Long-term deferred tax liability [2]	35,953	46,421	48,765	62,016	65,845
Total shareholders equity[2]	$398,029	$365,073	$348,147	$292,108	$386,236

(1) On January 1, 2006, we adopted SFAS No. 123 (R) and included share-based compensation for employee stock-based awards in our

results of operation.

(2) On December 31, 2006, we adopted Financial Accounting Standards Board (FASB) Interpretation No. 48 (FIN 48), *Accounting for Uncertainty in Income Taxes, an interpretation of SFAS No. 109* and as a result we reported a cumulative effect adjustment of $0.5 million, which increased our December 31, 2006 accumulated deficit balance in our balance sheet data.

Item 7. ***Management s Discussion and Analysis of Financial Condition and Results of Operations***

This Annual Report on Form 10-K, including the documents incorporated by reference in this Annual Report, includes forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E on Form 10-K of the Securities Exchange Act of 1934, as amended. These statements can be identified by the words expects, projects, hopes, believes, intends, should, estimate, will, would, m plans, could and other similar words. Actual results, events or performance could differ materially from these forward-looking statements based on a variety of factors, many of which are beyond our control. Therefore, readers are cautioned not to put undue reliance on these statements. Factors that could cause actual results or conditions to differ from those anticipated by these and other forward-looking statements include those more fully described in the Risk Factors section of this Annual Report and in other documents we file with the SEC. These forward-looking statements speak only as of the date hereof. We undertake no obligation to publicly release the results of any revisions to these forward-looking statements that may be made to reflect events or circumstances after the date hereof, or to reflect the occurrence of unanticipated events.

The following presentation of management s discussion and analysis of our financial condition and results of operations should be read together with our consolidated financial statements included in this Annual Report on Form 10-K.

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Overview

We are a leading manufacturer of mechanical circulatory support products for use by patients with HF. Our VADs are used primarily by HF patients to perform some or all of the pumping function of the heart. We currently offer the widest range of products to serve this market. We believe that our long-standing reputation for quality and innovation, and our excellent relationships with leading cardiovascular surgeons and HF cardiologists worldwide, position us to capture growth opportunities in the expanding HF market. Through our wholly-owned subsidiary ITC, we design, develop, manufacture and market point-of-care diagnostic test systems and incision products that provide fast and accurate blood test results to improve patient management, reduce healthcare costs and improve patient outcomes.

Our Business Model

Our business is comprised of two operating divisions: Cardiovascular and ITC.

The product line of our Cardiovascular division is:

Circulatory Support Products. Our mechanical circulatory support products include the PVAD, IVAD, HeartMate XVE, HeartMate II and CentriMag for acute, intermediate and long-term mechanical circulatory support for patients with advanced HF. We also manufacture and sell small diameter grafts using our proprietary materials to address the vascular access market for hemodialysis.

The product lines of our ITC division are:

Point-of-Care Diagnostics. Our point-of-care products include diagnostic test systems that monitor blood coagulation while a patient is being administered certain anticoagulants, as well as monitor blood gas/electrolytes, oxygenation and chemistry status.

Incision. Our incision products include devices used to obtain a patient s blood sample for diagnostic testing and screening for platelet function.

Critical Accounting Policies and Estimates

We have identified the policies and estimates below as critical to our business operations and the understanding of our results of operations. The impact of, and any associated risks related to, these policies and estimates on our business operations are discussed below. Preparation of financial statements in accordance with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amount of assets, liabilities, revenue and expenses and the disclosure of contingent assets and liabilities. There can be no assurance that actual results will not differ from those estimates and assumptions.

Revenue Recognition

We recognize revenue from product sales for our Cardiovascular and ITC divisions when evidence of an arrangement exists, title has passed (generally upon shipment) or services have been rendered, the selling price is fixed or determinable and collection is reasonably assured. Sales to distributors are recorded when title transfers upon shipment.

We recognize revenue from sales of certain Cardiovascular division products to first-time customers when we have determined that the customer has the ability to use the products. These sales frequently include products and training services under multiple element arrangements. Training is not considered essential to the functionality of the products. The amount of revenue under these arrangements allocated to training is based upon the fair market value of the training, which is typically performed on behalf of the Company by third party providers. The amount of revenue allocated to Cardiovascular products is made using the fair value method. Under this method, the total value of the arrangement is allocated to the training and the products based on the relative fair market values of the training and products.

In determining when to recognize revenue, management makes decisions on such matters as the fair values of the product and training elements when sold together, customer credit worthiness and warranty reserves. If any of these decisions proves incorrect, the carrying value of these assets and liabilities on our consolidated balance sheets could be significantly different, which could have a material adverse effect on our results of operations for any fiscal period.

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Reserves

We maintain allowances for doubtful accounts for estimated losses resulting from the inability of our customers to make payments owed to us for product sales and training services. If the financial condition of our customers were to deteriorate, resulting in an impairment of their ability to make payments, additional allowances may be required.

The majority of our products are covered by up to a two-year limited manufacturer s warranty from the date of shipment or installation. Estimated contractual warranty obligations are recorded when related sales are recognized and any additional amounts are recorded when such costs are probable and can be reasonably estimated, at which time they are included in Cost of product sales in our consolidated statements of operations.

Management must make judgments to determine the amount of reserves to accrue. If any of these management estimates proves incorrect, our financial statements could be materially and adversely affected.

Income Taxes

We make certain estimates and judgments in determining income tax expense for financial statement purposes. These estimates and judgments occur in the calculation of tax credits, benefits, and deductions, such as tax benefits from our non-U.S. operations and in the calculation of certain tax assets and liabilities, which arise from differences in the timing of revenue and expense for tax and financial statement purposes.

We adopted FIN 48, on December 31, 2006, as a result of which our tax positions are evaluated for recognition using a more-likely-than-not threshold, and those tax positions eligible for recognition are measured as the largest amount of tax benefit that is greater than fifty percent likely of being realized upon the effective settlement with a taxing authority that has full knowledge of all relevant information. As a result of adopting FIN 48, we reported a cumulative-effect adjustment of $0.5 million which increased our December 31, 2006 accumulated deficit balance.

We record a valuation allowance to reduce our deferred income tax assets to the amount that is more-likely-than-not to be realized. In evaluating our ability to recover our deferred income tax assets we consider all available positive and negative evidence, including our operating results, on-going tax planning and forecasts of future taxable income on a jurisdiction by jurisdiction basis. In the event we were to determine that we would be able to realize our deferred income tax assets in the future in excess of their net recorded amount, we would make an adjustment to the valuation allowance which would reduce the provision for income taxes. Conversely, in the event that all or part of the net deferred tax assets are determined not to be realizable in the future, an adjustment to the valuation allowance would be charged to earnings in the period such determination is made.

On December 31, 2006, we had $9.3 million of unrecognized tax benefits, of which $3.9 million would impact our effective tax rate if recognized. An unrecognized tax benefit under FIN 48 is the difference between a tax position taken (or expected to be taken) in a tax return and the benefit measured and recognized in a company s financial statements in accordance with the guidelines set forth in FIN 48. Our unrecognized tax benefit was reduced by approximately $0.5 million in 2007 to reflect the FIN 48 impact of a payment to the State of New Jersey in settlement of a tax audit with respect to years 1997 through 2000. In addition, during 2007, we filed tax returns in certain jurisdictions further decreasing our unrecognized tax benefit by approximately $2.6 million. It is reasonably possible that we will file or amend our tax returns in other jurisdictions in 2008 that will further decrease our unrecognized tax benefits by approximately $0.1 million. On December 29, 2007 we had unrecognized tax benefit balance of $6.9 million plus interest of $0.5 million and penalties of $0.1 million.

Evaluation of Purchased Intangibles and Goodwill for Impairment

In accordance with Statement of Accounting Standards (SFAS) No. 144, *Accounting for the Impairment or Disposal of Long-Lived Assets*, we periodically evaluate the carrying value of long-lived assets and identifiable intangible assets with finite lives for impairment, whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. If indicators of impairment exist, recoverability of assets to be held or used is assessed by a comparison of the carrying amount of an asset to future undiscounted net cash flows expected to be generated by the asset. If the aggregate undiscounted cash flows are less than the carrying value of the asset, then the resulting impairment charge to be recorded is calculated based on the amount by which the carrying amount of the asset exceeds its fair value. Fair value is determined primarily using the anticipated cash flows discounted at a rate commensurate with the risk involved. Management must make estimates of these future cash flows and the approximate discount rate, and if any of these estimates proves incorrect, the carrying value of these

assets on our consolidated balance sheets could become significantly impaired.

In accordance with SFAS No. 142, *Goodwill and Other Intangible Assets*, such assets with indefinite lives are not amortized but are subject to annual impairment tests. If there is an apparent impairment, a new fair value would be determined. If the new fair value is less than the carrying amount, an impairment loss would be recognized.

As of December 29, 2007, we do not believe that any of our long-lived assets, goodwill and other intangible assets are impaired.

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Valuation of Share-Based Awards

We account for share-based compensation in accordance with the fair value recognition provisions of SFAS No. 123(R). Under SFAS No. 123(R), share-based compensation cost is measured at the grant date based on the fair value of the award and is recognized as expense over the vesting period. Determining the fair value of option awards at the grant date requires judgment, including estimating the expected term of stock options, the expected volatility of our stock, risk free interest rate and expected dividends. The computation of the expected volatility assumption used in the Black-Scholes option pricing model for option grants is based on historical volatility. When establishing the expected life assumption, we review annual historical employee exercise behavior of option grants with similar vesting periods. In addition, judgment is also required in estimating the amount of share-based awards that are expected to be forfeited. If actual results differ significantly from these estimates, share-based compensation expense and our results of operations could be materially affected.

Results of Operations

The following table sets forth selected consolidated statements of operations data for the years indicated as a percentage of total product sales:

	For the Fiscal Years Ended		
	2007	**2006**	**2005**
Product sales	100%	100%	100%
Cost of product sales	42	41	39
Gross margin	58	59	61
Operating expenses:			
Selling, general and administrative	35	35	30
Research and development	19	19	16
Amortization of purchased intangible assets	5	6	6
Purchased in-process research and development		1	
Total operating expenses	59	61	52
Income (loss) from operations	(1)	(2)	9
Other income and (expense):			
Interest expense	(2)	(2)	(2)
Interest income and other	4	4	2
Income before taxes	1	0	9
Income tax expense (benefit)		(1)	2
Net income	1%	1%	7%

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For the Fiscal Years 2007 and 2006

Product Sales

Product sales in 2007 increased 10% to $234.8 million compared to $214.1 million in 2006. Cardiovascular sales increased $10.5 million and ITC sales increased $10.2 million. Product sales increases are due to an increase in volume unless otherwise noted. The primary components of the total $20.7 million increase in product sales were the following:

Cardiovascular product sales increased by $10.5 million, primarily due to increased sales of HeartMate II, partially offset by lower sales in our Thoratec product line as a result of increased usage of short term devices. In addition, a full year of product sales of CentriMag in 2007 contributed to the overall increase in product sales as compared to the three month of sales in 2006.

ITC product sales increased $10.2 million, primarily due to increased sales of our hospital point-of-care products along with increased sales of our alternate site and incision products resulting from market expansion and competitor product recalls. In addition, product sales of AVOXimeters also contributed to the increase in sales in 2007 as opposed to only fourth quarter sales in 2006.

Sales originating outside of the United States and U.S. export sales accounted for approximately 28% and 24% of our total product sales in 2007 and 2006, respectively.

Gross Profit

Gross profit was $136.3 million in 2007 as compared to $125.5 million in 2006. As a percentage of product sales, gross margin was 58% and 59% for 2007 and 2006, respectively. Gross margin included the following fluctuations:

Cardiovascular gross margin decreased by 0.6% due to unfavorable non-pump product mix and manufacturing variances partially offset by improved foreign currency exchange from our international operations.

ITC gross margin was the same for 2007 and 2006, due to lower product costs offset by higher costs from product and geographic mix and the voluntary Pro-time recall charges.

Selling, General and Administrative

Selling, general and administrative expenses in 2007 were $82.0 million, or 35% of product sales, as compared to $73.7 million, or 35% of product sales, in 2006. The $8.3 million increase in spending was primarily attributable to the following:

Cardiovascular costs increased by $2.6 million in 2007 as compared to 2006, primarily due to an increase in personnel expenses in 2007 related to market expansion and preparation for HeartMate II commercial approval, unfavorable foreign currency exchange and an increase in share-based compensation costs.

ITC costs increased by $2.6 million in 2007 as compared to 2006, primarily due to higher personnel costs, consulting fees and increase in reserves for overdue accounts receivable. In addition, in 2007 we incurred costs related to the AVOXimeter products for the full year as compared to selling costs incurred in 2006 for the fourth quarter only.

Corporate costs increased by $3.1 million in 2007 as compared to 2006 because of higher consulting and legal expenses related to the review of our stock option granting practices conducted during the first quarter of 2007, market research and compliance costs.

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Research and Development

Research and development expenses in 2007 were $43.8 million, or 19% of product sales, compared to $39.8 million, or 19% of product sales, in 2006. The $4.0 million increase was comprised of $2.2 million at our Cardiovascular division and $1.8 million at our ITC division. Research and development costs are largely project driven and the level of spending depends on the level of project activity planned and subsequently approved and conducted. The increase in costs at our Cardiovascular division was primarily due to regulatory and clinical costs associated with Phase II of the HeartMate II pivotal trial and HeartMate II product development. The increase in costs at our ITC division was primarily due to higher personnel and consulting costs related to new product development.

Amortization of Purchased Intangible Assets

Amortization of purchased intangible assets in 2007 was $12.6 million as compared to $12.1 million in 2006. The $0.5 million increase is attributable to higher amortization of intangible costs from the acquisition of Avox in October 2006.

Purchased In-Process Research and Development

Our in-process research and development (IPR&D) expenses were none in 2007 compared to $1.1 million in 2006. IPR&D costs from the acquisition of Avox in October 2006 were expensed in 2006 because they related to technological projects that were in development, had not reached technological feasibility, had no alternative future use and for which successful development was uncertain.

Litigation Costs

Litigation charges in 2007 were none compared to $0.4 million in 2006. The expenses in 2006 were primarily comprised of costs associated with a Federal securities law putative class action, and a related shareholder derivative action.

Interest Expense

Interest expense was $4.1 million in 2007 compared to $4.3 million in 2006. The components include $3.5 million and $3.7 million in interest payments in 2007 and 2006, respectively, and amortization of the debt issuance costs of $0.6 million in both 2007 and 2006, related to our senior subordinated convertible notes.

Interest Income and Other

Interest income and other in 2007 was $8.6 million compared to $8.5 million in 2006, or a $0.1 million increase. Interest income and other included $8.1 million of interest income in 2007 as compared to $7.6 million of interest income in 2006. The increase in interest income of $0.5 million was primarily due to higher average cash, cash equivalent and short-term investment balances and higher interest rates earned from these investments in 2007 as compared to 2006. In addition, foreign exchange gains increased by $0.2 million from our hedging activities, we had a gain of $0.3 million on a life insurance policy and royalty income increased by $0.2 million in 2007 as compared to 2006. These increases were offset by a write-down of an investment of $0.5 million in 2007 and lower rental income of $0.3 million in 2007 as compared to 2006 from the expiration of a sublease on a portion of our Pleasanton headquarters in March 2007.

Income Taxes

Our effective tax rate was a benefit of 38% in 2007 compared to a benefit of 58% in 2006. The increase in our annual effective tax rate of 20% on a comparative basis was primarily due to a tax expense from our U.S. tax return-to-provision true-up recorded in 2007, as compared to a tax benefit associated with this item in 2006, the sunset of the Extraterritorial Income Exclusion provisions in 2006 and reduced benefits from favorable foreign tax rates, all of which were only partially offset by increased tax advantaged income, the absence of any in-process research and development write-down for 2007 as compared to 2006, and lower permanent deductions related to expensing of incentive stock options. The 2006 effective rate benefit associated with the return-to-provision true-up as compared to the tax expense recorded for this item in 2007 primarily resulted from increased research and development credit realization in our 2005 tax return.

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For the Fiscal Years 2006 and 2005

Product Sales

Product sales in 2006 increased 6% to $214.1 million compared to $201.7 million in 2005. The Cardiovascular division increased sales by $8.5 million and the ITC division increased sales by $3.9 million. Product sales increases are due to an increase in volume unless otherwise noted. The primary components of the total $12.4 million increase in product sales were the following:

Cardiovascular product sales increased by $8.7 million, primarily due to higher sales of our HeartMate II product line, partially offset by lower sales of our Thoratec product line. In addition, *Vectra* product sales decreased by $3.3 million, principally due to the recognition in 2005 of a payment received related to the modification of our distribution agreement with C.R. Bard Corporation of $1.9 million.

ITC product sales increased $3.7 million, due primarily to increases in sales of our ProTime and HEMOCHRON products, as well as sales of AVOXimeter products in the fourth quarter of 2006. These increases were partially offset by a decrease in sales of our IRMA product. In addition, incision product sales decreased $0.2 million in 2006 as compared to 2005.

Sales originating outside of the United States and U.S. export sales accounted for approximately 24% and 23% of our total product sales in 2006 and 2005, respectively.

Gross Profit

Gross profit was $125.5 million in 2006 as compared to $123.3 million in 2005. Gross margin as a percentage of product sales for 2006 and 2005 was 59% and 61%, respectively. The 2% decrease in gross margin was due to the proportionate sales of ITC versus Cardiovascular products in conjunction with the following:

Cardiovascular gross margin decreased by 1% primarily due to recognition in 2005 of the payment received from the C.R. Bard Corporation for the modification of our distribution agreement as well as an unfavorable product mix in 2006. These decreases were partially offset by increased average selling prices.

ITC gross margin decreased by 5%, due to unfavorable product mix and manufacturing variances as well as increased freight costs.

Costs related to share-based compensation of $1.0 million were recorded in 2006 and not in 2005.

Selling, General and Administrative

Selling, general and administrative expenses in 2006 were $73.7 million, or 35% of product sales, as compared to $61.8 million, or 30% of product sales, in 2005. The $11.9 million increase in spending was primarily attributable to the following:

Costs related to share-based compensation of $5.9 million were recorded in 2006 and none were recorded in 2005.

Cardiovascular costs increased by $3.7 million in 2006 as compared to 2005, primarily due to an increase in personnel expenses in 2006 related to the expansion of our sales force and marketing organization, marketing initiatives and management consulting services.

ITC costs increased by $2.1 million in 2006 as compared to 2005, primarily due to higher personnel costs, rent, Group Purchasing Organization fees and consulting costs related to the implementation of a new enterprise resource planning software (ERP) system.

Corporate costs increased by $0.2 million in 2006 as compared to 2005 because of higher consulting and personnel costs, partially offset by lower CEO transition costs.

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Research and Development

Research and development expenses in 2006 were $39.8 million, or 19% of product sales, compared to $32.3 million, or 16% of product sales, in 2005. Of the $7.5 million increase, $2.3 million resulted from an increase in our stock-based compensation expenses combined with increase in our Cardiovascular and ITC divisions of $4.7 million and $0.6 million, respectively, year over year. The increased expense in the Cardiovascular division was partially due to a one-time charge of $1.6 million related to the redirection of our HeartMate III program in December 2006. Research and development costs are largely project driven, and the level of spending depends on the level of project activity planned and subsequently approved and conducted. The primary component of our research and development costs is employee salaries and benefits. Research and development costs also include regulatory and clinical costs associated with our compliance with FDA regulations and clinical trials such as the Phase II HeartMate II pivotal trial.

Amortization of Purchased Intangible Assets

Amortization of purchased intangible assets in 2006 was $12.1 million as compared to $11.2 million in 2005. The $0.9 million increase is attributable to higher amortization of intangible costs from the acquisition of Avox in October 2006 and a change in business conditions that caused us to modify the remaining economic useful lives of our identifiable intangible assets under SFAS No. 144 in January 2006.

Purchased In-Process Research and Development

Our in-process research and development (IPR&D) expenses in 2006 totaled $1.1 million and none in 2005. IPR&D costs from the acquisition of Avox in October 2006, were written off because they related to technological projects that were in development, had not reached technological feasibility, had no alternative future use and for which successful development was uncertain.

Litigation Costs

Litigation charges in 2006 were $0.4 million compared to $0.1 million in 2005. The expense in both years is primarily comprised of costs associated with a Federal securities law putative class action, and a related shareholder derivative action.

Interest Expense

Interest expense was $4.3 million in 2006 compared to $4.1 million in 2005. The components include $3.6 million and $3.5 million in interest payments and $0.6 million and $0.6 million in amortization of the debt issuance costs, related to our senior subordinated convertible notes in 2006 and 2005, respectively.

Interest Income and Other

Interest income and other in 2006 was $8.5 million compared to $4.2 million in 2005. This increase was primarily due to higher interest income earned on our investment portfolio based on increased average cash and investment balances and higher interest rates in 2006 compared with 2005. Additionally, we received rental income of $0.5 million from the sublease of a portion of our headquarters building in the first quarter of 2006.

Income Taxes

Our effective tax rate was a benefit of 58% in 2006 compared to an expense of 27% in 2005. The decrease in our annual effective tax rate for 2006 was primarily attributable to a decrease in income before taxes, foreign earnings considered to be permanently reinvested outside the U.S. and increases in tax-advantaged interest income and research and development credits. These decreases were partially offset by an increase in non-deductible share-based compensation expense related to our adoption of SFAS No. 123(R).

Liquidity and Capital Resources

We had working capital of $301.7 million at December 29, 2007 compared with $265.7 million at December 30, 2006. Cash and cash equivalents were $20.7 million at December 29, 2007 compared to $67.5 million at December 30, 2006. The decrease in cash and cash equivalents was primarily due to net purchases of short-term investments of $69.4 million, as well as cash taxes paid, purchases of property, plant and equipment and a strategic investment, partially offset by net proceeds from issuance of common stock upon the exercise of stock options and employee stock purchase plans and from cash generated by operations.

In 2007, cash provided by operating activities was $14.4 million. This amount included net income of $3.2 million increased by positive non-cash adjustments to net income of $27.8 million primarily comprised of $21.8 million for depreciation and amortization, $11.4 million related to share-based compensation expenses, and $3.3 million of tax

benefit related to the exercise of stock options. These positive cash contributions were partially offset by a decrease of $2.0 million related to excess tax benefits from share-based compensation and a decrease of $9.5 million in our net deferred tax liability. Changes in assets and liabilities used additional cash of $16.5 million largely due to the increase in receivables, inventory and income tax receivable.

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In 2007, investing activities used $78.0 million in cash, with $69.4 million from the net purchase of investment securities, $6.7 million from the purchase of property, plant and equipment, net, which includes $3.7 million in build-up of product inventory of drivers and demonstration equipment into fixed assets, and $2.0 million in a strategic investment.

In 2007, cash provided by financing activities was $17.0 million, and primarily was comprised of $15.9 million from proceeds related to stock option exercises and purchases under our Employee Stock Purchase Plan and $2.0 million from excess tax benefits from share-based compensation, partially offset by $1.0 million of restricted stock for payment of income tax withholding due upon vesting.

We believe that cash and cash equivalents, short-term available-for-sale investments on hand and expected cash flows from operations, will be sufficient to fund our operations, capital requirements and stock repurchase programs for at least the next twelve months.

Recent turmoil in the financial markets has had an adverse impact on debt and equity market activities including, among other things, volatility in security prices, diminished liquidity, rating downgrades of certain investments and declining valuations of others. We have assessed the implications of these factors on our current business and determined that there has not been a significant impact to our financial position, results of operations or liquidity during 2007. In addition, the impact of inflation on our financial position and the results of operations was not significant during any of the periods presented.

As of December 29, 2007, we owned approximately $62.4 million of various tax exempt notes, classified as current assets, with an auction reset feature (auction rate securities). Even though the stated maturity dates of these auction rate securities may be one year or more beyond the balance sheet date, we have classified all auction rate securities as short-term investments in accordance with Accounting Research Bulletin No. 43, Chapter 3A, Working Capital Current Assets and Current Liabilities, as they are reasonably expected to be realized in cash or sold during our normal operating cycle.

At February 15, 2008, we owned approximately $46.2 million of various tax exempt notes, classified as current assets, with an auction reset feature (auction rate securities). A majority of our auction rate securities are student loans substantially backed by the federal government. In February 2008, several auctions failed related to our auction rate securities and there is no assurance other auction rate securities in our investment portfolio will experience successful auctions. An auction failure means that the parties wishing to sell securities could not and are instead required to hold the investment until a successful auction is held. If the issuers are unable to successfully complete future auctions and their credit ratings deteriorate, we may in the future be required to record an impairment charge on these investments. Notwithstanding our expectation that the auction rate securities market will return to normal and provide liquidity for these investments, it could conceivably take until the final maturity of the underlying notes (up to 30 years) to realize our investments recorded value. Based on our expected operating cash flows, and our other sources of cash, we do not anticipate the potential lack of liquidity on these investments will affect our ability to execute our current business plan.

Off Balance Sheet Arrangements

Letter of Credit We maintain an Irrevocable Standby Letter of Credit as part of our workers compensation insurance program. The Letter of Credit is not collateralized. Unless terminated by one of the parties, the Letter of Credit automatically renews on June 30 of each year. At December 29, 2007, our Letter of Credit balance was approximately $660,000. This Letter of Credit has not been drawn against.

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Contractual Obligations

As of December 29, 2007, we had the following contractual obligations:

	Total	2008	2009	2010	2011	2012	Thereafter
Long-Term Debt Obligations [(a)]	$ 258.9	$ 3.4	$ 3.4	$ 3.4	$ 3.4	$ 3.4	$ 241.9
Operating Lease Obligations [(b)]	31.4	3.2	2.9	2.9	2.9	2.9	16.6
Purchase Obligations [(c)]	36.2	25.3	1.8	1.8	1.8	1.8	3.7
Total	$ 326.5	$ 31.9	$ 8.1	$ 8.1	$ 8.1	$ 8.1	$ 262.2

(a) Includes interest of $10.0 million and original issue discount of $103.7 million. See note 9 to our consolidated financial statements included in this Annual Report on Form 10-K related to our long-term debt.

(b) Our operating lease obligations of $31.4 million were comprised of our various leased facilities and office equipment.

(c) Our purchase obligations include $36.2 million of supply agreements in effect at December 29, 2007.

As of December 29, 2007, the liability for uncertain tax positions was $7.4 million including interest and penalties and this liability is excluded from the table above. Due to the high degree of uncertainty regarding the timing of potential future cash flows associated with these liabilities, we are unable to make a reasonable reliable estimate of the amount and period in which these liabilities might be paid.

Accounting Pronouncements

In September 2006, the FASB issued SFAS No. 157, *Fair Value Measurements* which defines fair value, establishes a framework for measuring fair value, and expands disclosures about fair value measurements. SFAS No. 157 does not require any new fair value measurements, but rather eliminates inconsistencies in guidance found in various prior accounting pronouncements. We are currently evaluating the accounting and disclosure requirements that this guidance will have on our results of operations or financial condition when we adopt SFAS No. 157 at the beginning of our fiscal year 2008.

In February 2008, the FASB issued SFAS No. 157-2, *Effective Date of FASB Statement No. 157*. With the issuance of SFAS No. 157-2, the FASB agreed to: (a) defer the effective date in SFAS No. 157 for one year for certain nonfinancial assets and nonfinancial liabilities, except those that are recognized or disclosed at fair value in the financial statements on a recurring basis (at least annually), and (b)remove certain leasing transactions from the scope of SFAS No. 157. The deferral is intended to provide the FASB time to consider the effect of certain implementation issues that have arisen from the application of SFAS No. 157 to the assets and liabilities. We are currently evaluating the accounting and disclosure requirements that this guidance will have on our results of operations or financial conditions when we adopt SFAS No. 157 at the beginning of our fiscal year 2008.

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In February 2007, the FASB issued SFAS No. 159, *The Fair Value Option for Financial Assets and Financial Liabilities*. SFAS No. 159 permits us to choose, at specified election dates, eligible instruments to measure at fair value (Fair Value Option). Unrealized gains and losses on instruments for which the Fair Value Option has been elected are reported in earnings. The Fair Value Option is applied instrument-by-instrument (with certain exceptions), is irrevocable (unless a new election date occurs) and is applied only to an entire instrument. If we measure eligible instruments using the Fair Value Option, we would be required to recognize changes in fair value in earnings and to expense upfront cost and fees associated with the instrument for which the Fair Value Option is elected from and after January 1, 2008. We are currently evaluating the accounting and disclosure requirements that this guidance will have on our results of operations or financial condition when we adopt SFAS No. 159 at the beginning of our fiscal year 2008.

In June 2007, the Emerging Issues Task Force (EITF) reached a final consensus on Issue No. 07-3 (EITF 07-3), *Accounting for Nonrefundable Advance Payments for Goods or Services to Be Used in Future Research and Development Activities*, which requires that non-refundable advance payments for future research and development activities be capitalized until the goods have been delivered or related services have been performed. The adoption of EITF 07-3 is on a prospective basis and will only impact us if we enter into an agreement which requires a non-refundable advance payment beginning with our fiscal year 2008.

In December 2007, the FASB issued SFAS No. 141R, *Business Combinations*, which requires the acquiring entity in a business combination to record all assets acquired and liabilities assumed at their respective acquisition-date fair values, changes the recognition of assets acquired and liabilities assumed arising from contingencies, changes the recognition and measurement of contingent consideration, and requires the expensing of acquisition-related costs as incurred. SFAS 141R also requires additional disclosure of information surrounding a business combination, such that users of the entity s financial statements can fully understand the nature and financial impact of the business combination. The provisions of SFAS No. 141R will only impact us if we are party to a business combination after our fiscal year 2008.

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Item 7A. ***Quantitative and Qualitative Disclosures About Market Risk***

Interest Rate Risk

Our investment portfolio is made up of marketable investments in money market funds, auction rate securities, U.S. Treasury securities and debt instruments of government agencies, local municipalities, and high quality corporate issuers. All investments are carried at market value and are treated as available-for-sale. Investments with maturities beyond one year may be classified as short-term based on their highly liquid nature due to the frequency with which the interest rate is reset and because such marketable securities represent the investment of cash that is available for current operations. Our holdings of the securities of any one issuer, except government agencies, do not exceed 10% of the portfolio. If interest rates rise, the market value of our investments may decline, which could result in a loss if we are forced to sell an investment before its scheduled maturity. If interest rates were to rise or fall from current levels by 25 basis points, the change in our net unrealized loss on investments would be $0.2 million. We do not utilize derivative financial instruments to manage interest rate risks.

Our senior subordinated convertible notes do not bear interest rate risk as the notes were issued at a fixed rate of interest.

As of February 15, 2008, we owned approximately $46.2 million of various tax exempt notes, classified as current assets, with an auction reset feature (auction rate securities). A majority of our auction rate securities are student loans substantially backed by the federal government. In February 2008, several auctions failed related to our auction rate securities and there is no assurance other auction rate securities in our investment portfolio will experience successful auctions. An auction failure means that the parties wishing to sell securities could not and are instead required to hold the investment until a successful auction is held. If the issuers are unable to successfully complete future auctions and their credit ratings deteriorate, we may in the future be required to record an impairment charge on these investments. Notwithstanding our expectation that the auction rate securities market will return to normal and provide liquidity for these investments, it could conceivably take until the final maturity of the underlying notes (up to 30 years) to realize our investments recorded value. Based on our expected operating cash flows, and our other sources of cash, we do not anticipate the potential lack of liquidity on these investments will affect our ability to execute our current business plan.

Foreign Currency Rate Fluctuations

We conduct business in foreign countries. Our international operations consist primarily of sales and service personnel for our mechanical circulatory support products who report to our U.S. sales and marketing group and are internally reported as part of our Cardiovascular division. All assets and liabilities of our non-U.S. operations stated in UK pounds are translated into U.S. dollars at the period-end exchange rates and the resulting translation adjustments are included in comprehensive income (loss). The period-end translation of the non-functional currency assets and liabilities (primarily assets and liabilities on our UK subsidiary s consolidated balance sheet that are not denominated in UK pounds) at the period-end exchange rates result in foreign currency gains and losses, which are included in our consolidated statements of operations in Interest income and other.

We use forward foreign currency contracts to hedge the gains and losses generated by the re-measurement of non-functional currency assets and liabilities (primarily assets and liabilities on our UK subsidiary s consolidated balance sheet that are not denominated in UK pounds). These contracts typically have maturities of three months or less.

Our financial instrument contracts qualify as derivatives under SFAS No. 133 *Accounting for Derivative Instrument and Hedging Activities* and we valued these contracts at the estimated fair value at December 29, 2007. The change in fair value of the forward currency contracts is included in Interest income and other, and offsets the foreign currency exchange gains and losses in the consolidated statement of operations. The impacts of these foreign currency contracts are:

	For the Fiscal Years Ended	
	2007	2006
	(in thousands)	
Foreign currency exchange losses on foreign currency contracts	$ (702)	$(231)

Foreign currency exchange gains on foreign translation adjustments	1,049	330

As of December 29, 2007, we had forward contracts to sell euros with a notional value of 7.3 million and purchase UK pounds with a notional value of £3.7 million, and as of December 30, 2006 we had forward contracts to sell euros with a notional value of 3.9 million and purchase UK pounds with a notional value of £1.7 million. As of December 29, 2007, our forward contracts had an average exchange rate of one U.S. dollar to 0.6956 euros and one U.S. dollar to 0.5051 UK pounds. It is highly uncertain how currency exchange rates will fluctuate in the future. The potential fair value loss for a hypothetical 10% adverse change in foreign currency exchange rates would be approximately $1.8 million.

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Item 8. ***Financial Statements and Supplementary Data***
THORATEC CORPORATION
INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Shareholders of Thoratec Corporation:

We have audited the accompanying consolidated balance sheets of Thoratec Corporation and its subsidiaries (the Company) as of December 29, 2007 and December 30, 2006 and the related consolidated statements of income, shareholders equity, and cash flows for each of the three years in the period ended December 29, 2007. Our audits also included the consolidated financial statement schedule listed in Item 15(a) 2. These consolidated financial statements and consolidated financial statement schedule are the responsibility of the Company s management. Our responsibility is to express an opinion on these consolidated financial statements and consolidated financial statement schedule based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, such consolidated financial statements present fairly, in all material respects, the financial position of Thoratec Corporation and its subsidiaries as of December 29, 2007 and December 30, 2006, and the results of their operations and their cash flows for each of the three years in the period ended December 29, 2007, in conformity with accounting principles generally accepted in the United States of America. Also, in our opinion, such consolidated financial statement schedule, when considered in relation to the basic consolidated financial statements taken as a whole, presents fairly, in all material respects, the information set forth therein.

As discussed in Note 1 to the consolidated financial statements, in 2006 the Company changed its method of accounting for stock-based compensation upon adoption of Statement of Financial Accounting Standards No. 123(revised 2004), *Share-Based-Payments*.

As discussed in Note 1 and 13 to the consolidated financial statements in 2007, the Company charged its method of accounting for uncertainty in income taxes upon adoption of *Interpretation No.48, Accounting for Uncertainty in Income Taxes, an interpretation of Financial Accounting Standard No.109*.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the Company s internal control over financial reporting as of December 29, 2007 based on the criteria established in *Internal Control Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated February 27, 2008 expressed an unqualified opinion on the Company s internal control over financial reporting.

San Francisco, CA
February 27, 2008

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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Shareholders of Thoratec Corporation:

We have audited the internal control over financial reporting of Thoratec Corporation and its subsidiaries (the Company) as of December 29, 2007, based on criteria established in *Internal Control Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission. The Company s management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management s Report on Internal control over Financial Reporting. Our responsibility is to express an opinion on the Company s internal control over financial reporting based on our audit.

We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

A company s internal control over financial reporting is a process designed by, or under the supervision of, the company s principal executive and principal financial officers, or persons performing similar functions, and effected by the company s board of directors, management, and other personnel to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company s internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company s assets that could have a material effect on the financial statements.

Because of the inherent limitations of internal control over financial reporting, including the possibility of collusion or improper management override of controls, material misstatements due to error or fraud may not be prevented or detected on a timely basis. Also, projections of any evaluation of the effectiveness of the internal control over financial reporting to future periods are subject to the risk that the controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 29, 2007, based on the criteria established in *Internal Control Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated financial statements and financial statement schedule as of and for the year ended December 29, 2007 of the Company and our report dated February 27, 2008 expressed an unqualified opinion on those consolidated financial statements and financial statement schedule and included explanatory paragraphs regarding the Company s adoption of Financial Accounting Standards Board Interpretation No. 48 *Accounting for Uncertainty in Income Taxes* and Statement of Financial Accounting Standard No. 123 (revised 2004), *Share-Based Payment* .

San Francisco, CA
February 27, 2008

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THORATEC CORPORATION
CONSOLIDATED BALANCE SHEETS

	As of Fiscal Years Ended	
	2007	2006
	(in thousands)	
ASSETS		
Current assets:		
Cash and cash equivalents	$ 20,689	$ 67,453
Short-term available-for-sale investments	197,661	127,025
Restricted short-term investments		1,681
Receivables, net of allowances of $861 in 2007 and $491 in 2006	45,368	43,718
Inventories	54,935	49,666
Deferred tax asset	6,077	6,623
Prepaid expenses and other assets	6,379	2,986
Total current assets	331,109	299,152
Property, plant and equipment, net	46,477	45,808
Goodwill	98,368	98,494
Purchased intangible assets, net	121,767	134,349
Other	15,998	13,332
Total Assets	$ 613,719	$ 591,135
LIABILITIES AND SHAREHOLDERS EQUITY		
Current liabilities:		
Accounts payable	$ 9,770	$ 13,591
Accrued compensation	14,314	12,043
Accrued liabilities for legal, audit and warranty	2,219	2,086
Accrued income taxes		3,691
Other accrued liabilities	3,070	2,050
Total current liabilities	29,373	33,461
Senior subordinated convertible notes	143,750	143,750
Long-term deferred tax liability	35,953	46,421
Other	6,614	2,430
Total Liabilities	215,690	226,062
Shareholders equity:		
Common shares: no par, authorized 100,000; issued and outstanding 54,108 in 2007 and 52,329 in 2006		
Additional paid-in-capital	458,383	427,941
Accumulated deficit	(61,577)	(63,675)
Accumulated other comprehensive income (loss):		
Unrealized gain (loss) on investments	317	(16)
Cumulative translation adjustments	906	823

Total accumulated other comprehensive income	1,223	807
Total Shareholders Equity	398,029	365,073
Total Liabilities and Shareholders Equity	$ 613,719	$ 591,135

See notes to consolidated financial statements.

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THORATEC CORPORATION
CONSOLIDATED STATEMENTS OF OPERATIONS

	For the Fiscal Years Ended		
	2007	2006	2005
	(in thousands, except per share data)		
Product sales	$ 234,780	$ 214,133	$ 201,712
Cost of product sales	98,516	88,648	78,372
Gross profit	136,264	125,485	123,340
Operating expenses:			
Selling, general and administrative	82,044	73,687	61,804
Research and development	43,835	39,841	32,331
Amortization of purchased intangible assets	12,582	12,055	11,204
In-process research and development		1,120	
Litigation costs		447	95
Total operating expenses	138,461	127,150	105,434
Income (loss) from operations	(2,197)	(1,665)	17,906
Other income and (expense):			
Interest expense	(4,085)	(4,276)	(4,090)
Interest income and other	8,624	8,451	4,237
Income before taxes	2,342	2,510	18,053
Income tax expense (benefit)	(893)	(1,463)	4,855
Net income	$ 3,235	$ 3,973	$ 13,198
Net income per share:			
Basic	$ 0.06	$ 0.08	$ 0.27
Diluted	$ 0.06	$ 0.07	$ 0.26
Shares used to compute net income per share:			
Basic	53,493	52,155	49,359
Diluted	54,789	53,270	51,008

See notes to consolidated financial statements.

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THORATEC CORPORATION
CONSOLIDATED STATEMENTS OF SHAREHOLDERS EQUITY

	Common Shares	Additional Paid-in Capital	Retained Earnings (Accumulated Deficit)	Deferred Compensation	Accumulated Other Comprehensive Income (Loss)	Total Shareholders Equity	Total Comprehensive Income (Loss)
				(in thousands)			
BALANCE, JANUARY 1, 2005	48,375	$ 364,775	$ (71,514)	$ (1,586)	$ 433	$ 292,108	
Exercise of common stock options for cash	3,509	36,671				36,671	
Issuance of common shares under Employee Stock Purchase Plan	143	1,219				1,219	
Tax benefit related to employees and directors stock plans		7,346				7,346	
Repurchase of common stock, net	(290)	(3,012)	(485)			(3,497)	
Amortization of deferred compensation		357		1,402		1,759	
Expense of deferred compensation		175				175	
Comprehensive income:							
Unrealized loss on available-for-sale investments (net of taxes of $(75))					67	67	67
Foreign currency translation adjustment (net of taxes of $(256))					(899)	(899)	(899)
Net income			13,198			13,198	13,198
Total comprehensive income							$ 12,366
BALANCE, DECEMBER 31, 2005	51,737	$ 407,531	$ (58,801)	$ (184)	$ (399)	$ 348,147	
	1,079	13,380				13,380	

Exercise of common stock options for cash							
Issuance of common shares under Employee Stock Purchase Plan	118	1,692			1,692		
Tax benefit related to employees and directors stock plans		2,811			2,811		
Repurchase of common shares, net	(605)	(7,385)	(8,847)		(16,232)		
Share-based compensation		9,912		184	10,096		
Comprehensive income:							
Unrealized loss on available-for-sale investments (net of taxes of $161)				242	242		242
Foreign currency translation adjustment				964	964		964
Net income			3,973		3,973		3,973
Total comprehensive income						$	5,179
BALANCE, DECEMBER 30, 2006	52,329	$ 427,941	$ (63,675)	$	$ 807	$ 365,073	
Cumulative adoption effect of FIN 48			(534)			(534)	
Exercise of common stock options for cash	1,178	14,036				14,036	
Issuance of common shares under Employee Stock Purchase Plan	137	1,958				1,958	
Tax benefit related to employees and directors stock plans		3,327				3,327	
Repurchase of common shares, net	464	(411)	(603)			(1,014)	
Share-based compensation		11,532				11,532	
Comprehensive income:							

Unrealized loss on available-for-sale investments (net of taxes of $222)					333	333	333
Foreign currency translation adjustment					83	83	83
Net income			3,235			3,235	3,235
Total comprehensive income							$ 3,651
BALANCE, DECEMBER 29, 2007	54,108	$ 458,383	$ (61,577)	$	$ 1,223	$ 398,029	

See notes to consolidated financial statements.

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THORATEC CORPORATION
CONSOLIDATED STATEMENTS OF CASH FLOWS

	For the Fiscal Years Ended		
	2007	2006	2005
	(in thousands)		
Cash flows from operating activities:			
Net income	$ 3,235	$ 3,973	$ 13,198
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation and amortization	21,836	20,292	18,888
In process research and development		1,120	
Investment premium amortization (net)	977	65	374
Non-cash interest and other expenses	634	986	588
Write-down of investment	500		
Write-down of capitalized costs	161	1,588	
Tax benefit related to stock options	3,327	2,812	7,346
Share-based compensation expense	11,414	9,558	
Excess tax benefits from share-based compensation	(1,980)	(1,777)	
Amortization of deferred compensation			1,934
Loss on disposal of asset	254	14	242
Change in net deferred tax liability	(9,509)	(6,438)	(5,862)
Changes in assets and liabilities:			
Receivables	(3,373)	(7,389)	(2,853)
Inventories	(8,804)	(8,271)	(3,813)
Prepaid expenses and other assets	(1,124)	(388)	(257)
Accounts payable and other accrued liabilities	(74)	2,476	1,951
Accrued income taxes	(2,976)	(1,463)	4,855
Other	(134)	(358)	73
Net cash provided by operating activities	14,364	16,800	36,664
Cash flows from investing activities:			
Purchases of available-for-sale investments	(257,668)	(354,970)	(181,500)
Sales of available-for-sale investments	175,475	340,379	94,016
Maturities of available-for-sale and restricted investments	12,803	66,990	44,385
Investment in convertible debentures and preferred shares	(2,000)	(5,000)	
Purchases of property, plant and equipment, net	(6,651)	(24,498)	(7,967)
Acquisition of Avox, net of cash acquired		(8,786)	
Other		(152)	
Net cash provided by (used in) investing activities	(78,041)	13,963	(51,066)
Cash flows from financing activities:			
Proceeds from stock option exercises, net	14,036	13,380	36,671
Proceeds from stock issued under employee stock purchase plan	1,958	1,692	1,219
Excess tax benefits from share-based compensation	1,980	1,777	
Repurchase and retirement of common shares	(1,014)	(16,232)	(3,497)

Net cash provided by financing activities	16,960	617	34,393
Effect of exchange rate changes on cash and cash equivalents	(47)	964	(899)
Net increase (decrease) in cash and cash equivalents	(46,764)	32,344	19,092
Cash and cash equivalents at beginning of fiscal year	67,453	35,109	16,017
Cash and cash equivalents at end of fiscal year	$ 20,689	$ 67,453	$ 35,109
Supplemental disclosure of cash flow information:			
Cash paid for taxes	$ 9,345	$ 2,053	$ 3,176
Cash paid for interest	$ 3,414	$ 3,414	$ 3,485
Supplemental disclosure of non-cash investing and financing activities:			
Transfers of equipment from inventory to property, plant and equipment	$ 3,698	$ 1,917	$ 1,283

See notes to consolidated financial statements.

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THORATEC CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

1. Operations and Significant Accounting Policies

The Company and Basis of Presentation

Thoratec Corporation (referred to in these Notes as we, our, us, Thoratec or the Company), is headquartered i Pleasanton, California and is a manufacturer of mechanical circulatory support products for use by patients with heart failure (HF). We develop, manufacture and market products that are used by physicians and hospitals for cardiac assist, vascular and diagnostic applications. We organize and manage our business by functional operating entities, which operate in two business segments: Cardiovascular and International Technidyne Corporation (ITC). Our Cardiovascular segment develops, manufactures and markets proprietary medical devices used for circulatory support and vascular graft applications. Our ITC segment designs, develops, manufactures and markets point-of-care diagnostic test systems and incision products. We conduct business both domestically and internationally. On October 3, 2006, ITC, our wholly-owned subsidiary, acquired 100% of the outstanding common shares of privately held A-VOX Systems, Inc. (Avox).

We report on a 52-53 week fiscal year, which ends on the Saturday closest to December 31. The fiscal year ended December 31, 2005 (2005) included 52 weeks, the fiscal year ended December 30, 2006 (2006) included 52 weeks and the fiscal year ended December 29, 2007 (2007) included 52 weeks.

Principles of Consolidation

The consolidated financial statements include the accounts of the Company and our wholly-owned subsidiaries. All significant intercompany balances and transactions have been eliminated in consolidation.

Use of Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires our management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements, and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

Major Customers and Concentration of Credit Risk

We primarily sell our products to large hospitals and distributors. No customer accounted for more than 10% of total product sales in fiscal year 2007, 2006 or 2005. No customer had an accounts receivable balance greater than 10% of total accounts receivable at the end of fiscal year 2007 or 2006.

Credit is extended based on an evaluation of a customer s financial condition and generally collateral is not required. To date, credit losses have not been significant; however, we maintain allowances for potential credit losses.

Additionally, we are potentially subject to concentrations of credit risk in our investments. To mitigate this credit risk, we invest in high-grade instruments and limit our exposure to any one issuer.

Certain Risks and Uncertainties

We are subject to certain risks and uncertainties and believe that changes in any of the following areas could have a material adverse effect on our future financial position or results of operations: the ability to receive and maintain Food and Drug Administration (FDA), and foreign regulatory authorities approval to manufacture, market and sell our products; the ability to direct and manage current and future growth, including the growth of the number of Destination Therapy (DT) procedures performed; physician acceptance of our current or future products; our reliance on specialized suppliers; the ability to manufacture products on an efficient and timely basis and at a reasonable cost and in sufficient volume, including the ability to obtain timely deliveries of parts from suppliers; our ability to identify and correct quality issues in a timely manner and at a reasonable cost; new product development and introduction, including FDA approval and market receptiveness; the ability to protect our proprietary technologies or an infringement by us of others patents; the number of heart transplants conducted; any reduction in the number of medical procedures requiring certain types of blood monitoring; our dependence upon distributors and any changes made to our method of distribution; competition from other products; worldwide demand for circulatory support and graft products and blood coagulation testing and skin incision devices and the management of risks inherent in selling in foreign countries; foreign currency fluctuations; the long and variable sales and deployment cycle of our ventricular

assist device (VAD) products; the willingness of third party payors to cover and provide appropriate levels of reimbursement for our products; our subordinated convertible notes, their repayment and potential related dilution from conversion; the ability to realize the full value of our intangible assets; product liability or other claims; the ability to attract and retain talented employees; stock price volatility due to general economic conditions or future issuances and sales of our stock; the integration of any current and future acquisitions of companies or technologies; the occurrence of catastrophic disasters; the ability to achieve and maintain profitability; claims relating to the handling, storage or disposal of hazardous chemicals and biomaterials; changes in legal and accounting regulations and standards; changes in tax regulations; and limitations on potential acquisitions and stock pricing.

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Cash and Cash Equivalents

Cash and cash equivalents are defined as short-term, highly liquid investments with maturities of 90 days or less at the time of purchase.

Investments

Investments classified as short-term available-for-sale are reported at fair value based upon quoted market prices and consist primarily of auction rate securities, corporate and municipal bonds, and U.S. government obligations. Investments with maturities beyond one year are classified as short-term, since they are available and intended for use in current operations.

Investments classified as restricted are securities held in U.S. Treasury Securities held by a third party as collateral for future interest payments related to our senior subordinated convertible notes and are reported at fair value based upon quoted market prices. The investments that relate to interest payments due within one year have been classified as restricted short-term investments and the investments that relate to interest payments due more than one year later have been classified as restricted long-term investments.

For all investments, temporary differences between cost and fair value are presented as a separate component of accumulated other comprehensive income. We have determined that the investments had no impairments that were other-than-temporary. The specific identification method is used to determine realized gains and losses on investments.

Fair Value of Financial Instruments

Financial instruments include cash and cash equivalents, short-term available-for-sale investments, restricted short-term and long-term investments, customer receivables, accounts payable, senior subordinated convertible notes and certain other accrued liabilities. The fair values of short-term available-for-sale and restricted short-term and long-term investments are assessed using current quoted prices from major investment brokers. The carrying amounts of these investments are adjusted to market value monthly. The carrying amounts of all other financial instruments are reasonable estimates of their fair values.

Inventories

Inventories are stated at the lower of cost or market. Cost is based on the first in, first out method.

Property, Plant and Equipment

Property, plant and equipment is stated at cost. Depreciation is computed using the straight-line method based on estimated useful lives of 2 to 30 years. Leasehold improvements are amortized over the lesser of the useful life or the remaining term of the lease. Property, plant and equipment includes certain medical devices rented to customers. Depreciation expense of all rental equipment included in our rental program is recognized ratably over two to three years and is recorded in cost of product sales.

The Company leases certain facilities for administration, manufacturing and warehousing under long-term operating leases. Any scheduled rent increases, rent holidays and other related incentives are recognized on a straight-line basis over the term of the lease.

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Capitalized Software Costs for Internal Use

Costs of computer software developed or obtained for internal use are capitalized in accordance with Statement of Position 98-1, *Accounting for the Costs of Computer Software Developed or Obtained for Internal Use*. Capitalized computer software costs consist of purchased software licenses, implementation costs and consulting for certain projects that qualify for capitalization. We expense costs related to preliminary project assessment, research and development, re-engineering, training and application maintenance as incurred. Our ITC division capitalized a new enterprise resource planning software system (ERP System) in fiscal 2006 with capitalized costs of $1.9 million. All capitalized software costs are depreciated on a straight-line method over eight years after being placed in service. Depreciation expense for the ERP system in fiscal 2007 and 2006 was $0.3 million and $0.1 million, respectively.

Valuation of Long-Lived Assets

In accordance with Statement of Financial Accounting Standards (SFAS) No. 144, *Accounting for the Impairment or Disposal of Long-Lived Assets*, we periodically evaluate the carrying value of long-lived assets to be held and used including intangible assets, when events or circumstances warrant such a review. The carrying value of a long-lived asset to be held and used is considered impaired when the anticipated separately identifiable undiscounted cash flows from such an asset are less than the carrying value of the asset. In that event, a loss is recognized based on the amount by which the carrying value exceeds the fair value of the long-lived asset. Fair value is determined primarily using the anticipated cash flows discounted at a rate commensurate with the risk involved.

Goodwill

In accordance with SFAS No. 142, *Goodwill and Other Intangible Assets*, we do not amortize goodwill. We completed an impairment test of goodwill as required by SFAS No. 142. Upon completion of our impairment tests at the end of fiscal 2007, we determined that goodwill was not impaired.

Deferred Compensation Plan

We established a non-qualified, unfunded deferred compensation plan for certain management employees and our Board of Directors. Amounts deferred and contributed under the deferred compensation plan are credited or charged with the performance of investment options offered under the plan and elected by the participants. The liability for compensation deferred under this plan was $1.8 million and $1.6 million at December 29, 2007 and December 30, 2006, respectively, and is included in Other long-term on our consolidated balance sheets. We manage the risk of changes in the fair value of the liability for deferred compensation by electing to match our liability under the plan with an investment that offsets a substantial portion of the Company s exposure. The cash value of the investment vehicle, which includes funding for future deferrals, was $2.2 million at both fiscal years ended 2007 and 2006, and is included in Other assets on our consolidated balance sheets.

Sick Leave Accruals

Costs are accrued in connection with sick leave benefits by our ITC segment. These are estimated amounts that have been earned and the Company believes will be paid out to employees in a future period.

Debt Issuance Costs

Costs incurred in connection with the issuance of our senior subordinated convertible notes have been capitalized and are included in other assets on the consolidated balance sheet. These costs are amortized on a straight line basis until May 2011, the point at which we can redeem the debt, and such amortization expense is reflected in Interest expense on the consolidated statements of operations.

Foreign Currency Translation

Our international operations consist primarily of sales and service personnel for our Cardiovascular division who report to our U.S. sales and marketing group. The functional currency is the local currency. All assets and liabilities of our non-U.S. operations are translated into U.S. dollars at the period-end exchange rates and the resulting translation adjustments are included in other comprehensive income. The period-end translation of the non-functional currency assets and liabilities (primarily assets and liabilities on our UK subsidiary s consolidated balance sheet that are not denominated in UK Pounds) at the period-end exchange rates result in foreign currency gains and losses, which are included in Interest income and other.

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Repurchases of Common Stock

In February 2004, the Board of Directors authorized a stock repurchase program under which up to $25.0 million of our common stock could be acquired in the open market or in privately negotiated transactions. The number of shares to be purchased and the timing of purchases were based on several conditions, including the market price of our stock, general market conditions and other factors. The Board of Directors subsequently authorized the repurchase of an additional $60.0 million in May 2004, $25.0 million in July 2004 and $20.0 million in February 2006. Through fiscal 2007, we repurchased 9.5 million shares of our common stock for $119.9 million under these combined programs. For each share repurchased, we reduced the common stock account by the average value per share reflected in the account prior to the repurchase with the excess allocated to retained accumulated deficit. All repurchased shares have been retired.

Revenue Recognition and Product Warranty

We recognize revenue from product sales of our Cardiovascular and ITC segments when evidence of an arrangement exists, title has passed (generally upon shipment) or services have been rendered, the selling price is fixed or determinable and collectibility is reasonably assured. Sales to distributors are recorded when title transfers upon shipment. One distributor has certain limited product return rights. Other distributors have certain rights of return upon termination of their distribution agreement. A reserve for sales returns is recorded for these customers applying reasonable estimates of product returns based upon significant historical experience in accordance with SFAS No. 48, *Revenue Recognition when Right of Return Exists*. No other direct sales customers or distributors have return rights.

Sales of certain Cardiovascular products to first-time customers are recognized when it has been determined that the customer has the ability to use such products. These sales frequently include the sale of products and training services under multiple element arrangements. Training is not essential to the functionality of the products. The amount of revenue under these arrangements allocated to training is based upon fair market value of the training, which is typically performed on behalf of the Company by third party providers. The amount of product sales allocated to the Cardiovascular segment products is done on a fair value basis. Under this approach, the total value of the arrangement is allocated to the training and the Cardiovascular segment products based on the relative fair market value of the training and products.

We also rent certain medical devices to customers on a month-to-month or as-used basis. Rental income is based on utilization and is included in product sales as earned. Included in product sales for fiscal 2007, 2006 and 2005 are $7.3 million, $7.4 million and $7.2 million, respectively, of income earned from the rental of these medical devices.

The majority of our products are covered by up to a two-year limited manufacturer s warranty. Estimated contractual warranty obligations are recorded when related sales are recognized and any additional amounts are recorded when such costs are probable and can be reasonably estimated and are included in Cost of product sales. The change in accrued warranty expense is summarized in the following table:

	Balance Beginning of Year	Charges to Costs and Expenses	Warranty Expenditures	Balance End of Year
		(in thousands)		
Fiscal year ended 2007	$1,032	$ 634	$ (660)	$1,006
Fiscal year ended 2006	$1,073	$ 756	$ (797)	$1,032
Fiscal year ended 2005	$ 618	$ 772	$ (317)	$1,073

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Research and Development Expense

Research and development costs are charged to expense when incurred in accordance with Financial Accounting Standards Board (FASB) SFAS No. 2, *Accounting for Research and Development Costs*. Major components of research and development expenses consist of personnel costs, including salaries and benefits, and regulatory and clinical costs associated with our compliance with FDA regulations. Research and development costs are largely project driven, and the level of spending depends of the level of project activity planned and subsequently approved and conducted.

Cardiovascular research and development projects primarily involve costs related to our regulatory and clinical costs associated with our compliance with FDA regulations, clinical trial expenses for Phase II of the HeartMate II pivotal trial and HeartMate II development costs. In addition, during the fourth quarter of 2006, we expensed previously capitalized assets of $1.6 million related to HeartMate III and we will be redefining its attributes to focus on unmet clinical needs.

ITC research and development projects typically involve developing instruments and disposable test cuvettes or cartridges that will be used at the point-of-care. One such system is the Hemochron Signature Elite which was introduced in September of 2005. In addition, ITC devotes research and development efforts to maintain and improve current products based on customer feedback.

Purchased In-Process Research and Development

Purchased in-process research and development from a business combination represents the value assigned or paid for acquired research and development for which there is no alternative future use as of the date of acquisition. The income approach is generally used to value purchased in-process research and development. The income approach is based on the premise that the value of a security or asset is the present value of the future earning capacity that is available for distribution. Purchased in-process research and development is charged to expense as part of the allocation of the purchase price of a business combination.

In connection with our acquisition of Avox on October 3, 2006, we recorded $1.1 million related to purchased in-process research and development expenses for the year ended December 30, 2006. There were no purchased in-process research and development expenses for the year ended December 29, 2007 or December 31, 2005.

Share-Based Compensation

On January 1, 2006, we adopted SFAS No. 123(R), *Share-Based Payment*, which requires the measurement and recognition of compensation expense for all our share-based awards made to employees and directors including, stock options, restricted shares, restricted share units and purchase rights under our Employee Stock Purchase Plan (ESPP) based on estimated fair values utilizing the modified prospective transition method. In March 2005, the SEC issued Staff Accounting Bulletin (SAB) No. 107 providing supplemental implementation guidance for SFAS No. 123(R). We applied the provisions of SAB No. 107 in our adoption of SFAS No. 123(R).

Under the modified prospective transition method, SFAS No. 123(R) applies to new awards and to awards that were outstanding on January 1, 2006 that are subsequently modified, repurchased or cancelled. Additionally, compensation cost recognized in 2006 and 2007 includes compensation cost for all share-based payments granted prior to, but not yet vested as of, January 1, 2006, based on the grant-date fair value estimated in accordance with the original provisions of SFAS No. 123, *Accounting for Stock-Based Compensation*, and compensation cost for all share-based payments granted after January 1, 2006 based on the grant-date fair value estimated in accordance with the provisions of SFAS No. 123(R) as adjusted for forfeiture rates. Prior periods were not restated.

We use the Black-Scholes option pricing model as the method for determining the estimated fair value of stock options and purchase rights under the ESPP. The Black-Scholes model requires the use of highly subjective and complex assumptions which determine the fair value of share-based awards, including the option s expected term and the price volatility of the underlying stock. For restricted shares and restricted stock units, compensation expense is calculated based on the fair value of our stock at the grant date.

Prior to our adoption of SFAS No. 123(R), we accounted for share-based compensation to employees using the intrinsic value method in accordance with Accounting Principals Board Opinion (APB) No. 25, Accounting for Stock Issued to Employees, and accordingly recognized no compensation expense for stock option grants or for our ESPP.

See Note 10 *Share-Based Compensation* for further information on our equity incentive plans.

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Income Taxes

We make certain estimates and judgments in determining income tax expense for financial statement purposes. These estimates and judgments occur in the calculation of tax credits, benefits, and deductions, such as tax benefits from our non-U.S. operations and in the calculation of certain tax assets and liabilities, which arise from differences in the timing of revenue and expense for tax and financial statement purposes.

We adopted FASB Interpretation No. 48 (FIN 48), Accounting *for Uncertainty in Income Taxes, an interpretation of SFAS No. 109*. on December 31, 2006, as a result of which our tax positions are now evaluated for recognition using a more-likely-than-not threshold, and those tax positions eligible for recognition are measured as the largest amount of tax benefit that is greater than fifty percent likely of being realized upon the effective settlement with a taxing authority that has full knowledge of all relevant information. As a result of adopting FIN 48, we reported a cumulative-effect adjustment of $0.5 million which increased our December 31, 2006 accumulated deficit balance.

We record a valuation allowance to reduce our deferred income tax assets to the amount that is more-likely-than-not to be realized. In evaluating our ability to recover our deferred income tax assets we consider all available positive and negative evidence, including our operating results, on-going tax planning and forecasts of future taxable income on a jurisdiction by jurisdiction basis. In the event we were to determine that we would be able to realize our deferred income tax assets in the future in excess of their net recorded amount, we would make an adjustment to the valuation allowance which would reduce the provision for income taxes. Conversely, in the event that all or part of the net deferred tax assets are determined not to be realizable in the future, an adjustment to the valuation allowance would be charged to earnings in the period such determination is made.

We recognize liabilities for anticipated tax liabilities in the U.S. and other tax jurisdictions based on our estimate of whether, and the extent to which, additional tax payments are more-likely-than-not to meet the threshold. If we determine that payment of these amounts is not likely, we will reverse the liability and recognize a tax benefit during the period in which we determine that the liability is no longer necessary.

See Note 13, Income taxes for further information on our tax position.

Net Income Per Share

Basic net income per share is computed using the weighted average number of common shares outstanding for each respective year. Diluted net income per share amounts reflect the weighted average impact from the date of issuance of all potentially dilutive securities during the years presented unless the inclusion would have had an anti-dilutive effect for the full year.

Other Comprehensive Income

Other comprehensive income includes net income and is defined as the change in net assets during the period from non-owner sources, including unrealized gains and losses on available-for-sale investments and foreign currency translation adjustments.

Letter of Credit

We maintain an Irrevocable Standby Letter of Credit as part of our workers compensation insurance program. The Letter of Credit is not collateralized. Unless terminated by one of the parties, the Letter of Credit automatically renews on June 30 of each year. At December 29, 2007, our Letter of Credit balance was approximately $660,000.

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Recently Issued Accounting Standards

In September 2006, the FASB issued SFAS No. 157, *Fair Value Measurements* which defines fair value, establishes a framework for measuring fair value, and expands disclosures about fair value measurements. SFAS No. 157 does not require any new fair value measurements, but rather eliminates inconsistencies in guidance found in various prior accounting pronouncements. We are currently evaluating the accounting and disclosure requirements that this guidance will have on our results of operations or financial condition when we adopt SFAS No. 157 at the beginning of our fiscal year 2008.

In February 2008, the FASB issued SFAS No. 157-2, *Effective Date of FASB Statement No. 157*. With the issuance of SFAS No. 157-2, the FASB agreed to: (a) defer the effective date in SFAS No. 157 for one year for certain nonfinancial assets and nonfinancial liabilities, except those that are recognized or disclosed at fair value in the financial statements on a recurring basis (at least annually), and (b)remove certain leasing transactions from the scope of SFAS No. 157. The deferral is intended to provide the FASB time to consider the effect of certain implementation issues that have arisen from the application of SFAS No. 157 to the assets and liabilities. We are currently evaluating the accounting and disclosure requirements that this guidance will have on our results of operations or financial conditions when we adopt SFAS No. 157 at the beginning of our fiscal year 2008.

In February 2007, the FASB issued SFAS No. 159, *The Fair Value Option for Financial Assets and Financial Liabilities*. SFAS No. 159 permits us to choose, at specified election dates, eligible instruments to measure at fair value (Fair Value Option). Unrealized gains and losses on instruments for which the Fair Value Option has been elected are reported in earnings. The Fair Value Option is applied instrument-by-instrument (with certain exceptions), is irrevocable (unless a new election date occurs) and is applied only to an entire instrument. If we measure eligible instruments using the Fair Value Option, we would be required to recognize changes in fair value in earnings and to expense upfront cost and fees associated with the instrument for which the Fair Value Option is elected from and after January 1, 2008. We are currently evaluating the accounting and disclosure requirements that this guidance will have on our results of operations or financial condition when we adopt SFAS No. 159 at the beginning of our fiscal year 2008.

In June 2007, the Emerging Issues Task Force (EITF) reached a final consensus on Issue No. 07-3 (EITF 07-3), *Accounting for Nonrefundable Advance Payments for Goods or Services to Be Used in Future Research and Development Activities*, which requires that non-refundable advance payments for future research and development activities be capitalized until the goods have been delivered or related services have been performed. The adoption of EITF 07-3 is on a prospective basis and will only impact us if we enter into an agreement which requires a non-refundable advance payment beginning with our fiscal year 2008.

In December 2007, the FASB issued SFAS No. 141R, *Business Combinations*, which requires the acquiring entity in a business combination to record all assets acquired and liabilities assumed at their respective acquisition-date fair values, changes the recognition of assets acquired and liabilities assumed arising from contingencies, changes the recognition and measurement of contingent consideration, and requires the expensing of acquisition-related costs as incurred. SFAS 141R also requires additional disclosure of information surrounding a business combination, such that users of the entity s financial statements can fully understand the nature and financial impact of the business combination. The provisions of SFAS No. 141R will only impact us if we are party to a business combination after our fiscal year 2008.

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2. Investments

Our investments consist of United States Government and Government Agency Bonds, Auction Rate Municipal securities and Commercial Paper. All investments are carried at market value and are treated as available-for-sale. Investments with maturities beyond one year may be classified as short-term based on their highly liquid nature due to the frequency with which the interest rate is reset and because such marketable securities represent the investment of cash that is available for current operations. We include any unrealized gains and losses on short-term investments, net of tax, in shareholders equity as a component of other comprehensive income. Individual securities with a fair value below the cost basis at December 29, 2007 were evaluated to determine if they were other-than-temporarily impaired.

As of December 29, 2007, we did not have any unrealized losses from our investment in U.S. government agency mortgage-backed securities.

The aggregate market value, cost basis and gross unrealized gains and losses of available-for-sale investments and restricted short-term investments for fiscal 2007 and 2006 by major security type are as follows:

	Amortized Cost	Gross Unrealized Gains (Losses)	Fair Value
		(in thousands)	
As of Fiscal Year End 2007:			
Short-term investments:			
Municipal bonds and auction rate securities	$ 197,144	$ 517	$ 197,661
As of Fiscal Year End 2006:			
Short-term investments:			
Municipal bonds and auction rate securities	$ 122,047	$ (13)	$ 122,034
Commercial paper	4,991		4,991
Restricted investments in U.S. Government obligations	1,694	(13)	1,681
	$ 128,732	$ (26)	$ 128,706

The contractual maturities of available-for-sale investments and restricted investments as of December 29, 2007 and December 30, 2006, regardless of the consolidated balance sheet classifications, are as follows:

	Amortized Cost	Fair Value
	(in thousands)	
As of Fiscal Year End 2007:		
Maturing within one year	$ 146,207	$ 146,361
Due after one year through two years	50,937	51,300
	$ 197,144	$ 197,661
As of Fiscal Year End 2006:		
Maturing within one year	$ 111,761	$ 111,748
Due after one year through two years	16,971	16,958
	$ 128,732	$ 128,706

As of December 29, 2007, we owned approximately $62.4 million of various tax exempt notes, classified as current assets, with an auction reset feature (auction rate securities). Even though the stated maturity dates of these auction rate securities may be one year or more beyond the balance sheet date, we have classified all auction rate securities as short-term investments in accordance with Accounting Research Bulletin No. 43, Chapter 3A, Working Capital Current Assets and Current Liabilities, as they are reasonably expected to be realized in cash or sold during our normal operating cycle.

A majority of our auction rate securities are student loans substantially backed by the federal government. In February 2008, several auctions failed related to our auction rate securities and there is no assurance other auction rate securities in our investment portfolio will experience successful auctions in the future. An auction failure means that the parties wishing to sell securities could not and are instead required to hold the investment until a successful auction is held. If the issuers are unable to successfully complete future auctions and their credit ratings deteriorate, we may in the future be required to record an impairment charge on these investments. It could conceivably take until the final maturity of the underlying notes (up to 30 years) to realize our investments recorded value.

There are no unrealized gains or losses in relation to auction rate securities as of December 29, 2007 because of the frequent interest rate resetting nature of auction rate securities.

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3. Financial Instruments

We conduct business in foreign countries. Our international operations consist primarily of sales and service personnel for our mechanical circulatory support products who report to our U.S. sales and marketing group and are internally reported as part of our Cardiovascular division. All assets and liabilities of our non-U.S. operations stated in UK pounds are translated into U.S. dollars at the period-end exchange rates and the resulting translation adjustments are included in comprehensive income (loss). The period-end translation of the non-functional currency assets and liabilities (primarily assets and liabilities on our UK subsidiary s consolidated balance sheet that are not denominated in UK pounds) at the period-end exchange rates result in foreign currency gains and losses, which are included in our consolidated statements of operations in Interest income and other.

We use forward foreign currency contracts to hedge the gains and losses generated by the re-measurement of non-functional currency assets and liabilities (primarily assets and liabilities on our UK subsidiary s consolidated balance sheet that are not denominated in UK pounds). These contracts typically have maturities of three months or less.

Our financial instrument contracts qualify as derivatives under SFAS No. 133 *Accounting for Derivative Instrument and Hedging Activities* and we valued these contracts at the estimated fair value at December 29, 2007 and December 30, 2006. The change in fair value of the forward currency contracts is included in Interest income and other, and offsets the foreign currency exchange gains and losses in the consolidated statement of operations. The impacts of these foreign currency contracts are:

	For the Fiscal Years Ended	
	2007	2006
	(in thousands)	
Foreign currency exchange losses on foreign currency contracts	$ (702)	$(231)
Foreign currency exchange gains on foreign translation adjustments	1,049	330

As of December 29, 2007, we had forward contracts to sell euros with a notional value of 7.3 million and purchase UK pounds with a notional value of £3.7 million, and as of December 30, 2006 we had forward contracts to sell euros with a notional value of 3.9 million and purchase UK pounds with a notional value of £1.7 million. As of December 29, 2007, our forward contracts had an average exchange rate of one U.S. dollar to 0.6956 euros and one U.S. dollar to 0.5051 UK pounds.

4. Inventories

Inventories consisted of the following:

	As of Fiscal Years Ended	
	2007	2006
	(in thousands)	
Finished goods	$ 20,732	$ 22,527
Work-in-process	10,053	7,008
Raw materials	24,150	20,131
Total	$ 54,935	$ 49,666

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5. Purchased Intangible Assets and Goodwill

The change in the carrying amount of goodwill was as follows:

	For the Fiscal Years Ended	
	2007	2006
	(in thousands)	
Balance at the beginning of the fiscal year	$ 98,494	$ 94,097
Adjustment for Avox acquisition	(126)	4,397
Balance as of the end of the fiscal year	$ 98,368	$ 98,494

In October 2006, ITC, our wholly-owned subsidiary, completed the acquisition of all of the outstanding common shares of privately held Avox based in San Antonio, Texas. The assets and liabilities of Avox were accounted for under the purchase method of accounting and recorded at their fair values at October 3, 2006. The excess of the purchase price over the estimated fair values of the net assets acquired was recorded as an increase in goodwill. The results of operations of Avox have been included in the Consolidated Statement of Operations beginning as of October 3, 2006.

The total purchase price for Avox has been allocated to the assets and liabilities acquired. We paid $9.3 million in cash plus $0.2 million of transaction costs which are allocated as follows.

	(in thousands)	Amortization Period
Purchase price allocation:		
Tangible assets acquired	$ 2,460	
Liabilities assumed	(1,109)	
Deferred tax liability	(1,894)	
Intangible assets acquired:		
Patents and trademarks	700	6-11 yrs
Developed technology	2,960	6-12 yrs
Customer and distribution relationships and other	820	8-16 yrs
Non-compete agreements	90	3 yrs
In-process research and development	1,120	Expensed
Inventory backlog	100	Expensed
Goodwill	4,271	Indefinite
Total purchase consideration	$ 9,518	

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In February 2001, we merged with Thermo Cardiosystems, Inc. (the Merger). The components of identifiable intangible assets related to the Merger include: patents and trademarks, core technology (Thoralon, our patent protected bio-material), and developed technology (patent technology, other than core technology, acquired in the Merger). The components of intangible assets related to the Avox acquisition include: patents and trademarks, developed technology and customer and distributor relationships and other. The combined components are included in purchased intangibles on the consolidated balance sheets are as follows:

	As of Fiscal Year Ended 2007		
	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount
		(in thousands)	
Patents and trademarks	$ 38,515	$ (25,086)	$ 13,429
Core technology	37,485	(11,793)	25,692
Developed technology	125,742	(43,748)	81,994
Customer and distributor relationships and other	897	(245)	652
Total purchased intangible assets	$ 202,639	$ (80,872)	$ 121,767

	As of Fiscal Year Ended 2006		
	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount
		(in thousands)	
Patents and trademarks	$ 38,515	$ (21,350)	$ 17,165
Core technology	37,485	(10,275)	27,210
Developed technology	125,742	(36,564)	89,178
Customer and distributor relationships and other	897	(101)	796
Total purchased intangible assets	$ 202,639	$ (68,290)	$ 134,349

Amortization expense related to identifiable intangible assets for fiscal 2007, 2006 and 2005 was $12.6 million, $12.1 million and $11.2 million, respectively. The estimated fair values of assets and liabilities were determined using the income approach for valuation of intangibles, which projects the associated revenues, expenses and cash flows attributable to the customer base, and the market value approach for valuation of other assets and liabilities, which considers the price at which comparable assets have been or are being purchased.

As part of our impairment test as of the end of fiscal year 2007, we evaluated our useful estimated lives of the intangible assets, and assuming no further acquisitions, our amortization expense is expected to be approximately $13.2 million in 2008 declining to $9.1 million by 2012. This decline in amortization expense is because of certain intangibles which will be fully amortized in 2009 and 2010. Patents and trademarks have useful lives ranging from one to thirteen years, core and developed technology assets have useful lives ranging from three to sixteen years and customer and distributor relationships and other have useful lives ranging five to ten years.

6. Property, Plant and Equipment

Property, plant and equipment consisted of the following:

	As of Fiscal Years Ended

	2007	2006
	(in thousands)	
Land, building and improvements	$ 16,135	$ 16,134
Equipment and capitalized software	61,886	53,860
Furniture and leasehold improvements	22,804	21,199
Total	100,825	91,193
Less accumulated depreciation	(54,348)	(45,385)
	$ 46,477	$ 45,808

Depreciation expense in fiscal years 2007, 2006 and 2005 was $9.3 million, $8.2 million and $7.7 million, respectively.

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7. Other Assets

On August 23, 2006, we purchased a $5 million convertible debenture from Levitronix LLC (Levitronix), a company with which we have a distribution arrangement to sell Levitronix products. The convertible debenture is a long-term note receivable bearing annual interest at a rate of 5.7%, to be accrued monthly, and at the option of Levitronix, paid in cash or in-kind semi-annually on February 23 and August 23 to maturity on August 23, 2013. We may convert the debenture at our option into membership interests of Levitronix at a conversion price of $4.2857. This conversion feature is not an embedded derivative under SFAS No. 133 because the membership interests of the issuer are not readily convertible to cash. If we had converted the debenture at December 29, 2007, our ownership in Levitronix would have been less than 5%.

At December 29, 2007, the convertible debenture of $5 million plus accrued interest of $0.4 million was included in Other assets on our consolidated balance sheet.

8. Commitments and Contingencies

Leases

We lease manufacturing, office and research facilities and equipment under various operating lease agreements. Future minimum lease payments as of the end of 2007 are as follows:

Fiscal year:		**(in thousands)**
2008	$	3,192
2009		2,886
2010		2,880
2011		2,924
2012		2,974
Thereafter		16,551
Total	$	31,407

Rent expense for all operating leases was $3.0 million in 2007, $2.7 million in 2006 and $2.5 million in 2005.

Commitments

We had purchase order commitments, including both supply and inventory related agreements, totaling approximately $36.2 million and $15.4 million as of the end of 2007 and 2006, respectively.

9. Long-Term Debt

In 2004, we completed the sale of $143.8 million initial principal amount of senior subordinated convertible notes due in 2034. The convertible notes were sold to Qualified Institutional Buyers pursuant to the exemption from the registration requirements of the Securities Act of 1933, as amended, provided by Rule 144A thereunder. We repurchased 4.2 million shares of our outstanding common stock for $60 million. The proceeds have been and will be used for general corporate purposes, which may include additional stock repurchases, strategic investments or acquisitions. Principal amount of the convertible notes at maturity was $247.4 million offset by the original issue discount of $103.7 million and net debt issuance costs of $4.3 million to equal to net proceeds of $139.4 million.

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The senior subordinated convertible notes were issued at an issue price of $580.98 per note, which is 58.098% of the principal amount at maturity of the notes. The senior subordinated convertible notes bear interest at a rate of 1.3798% per year on the principal amount at maturity, payable semi-annually in arrears in cash on May 16 and November 16 of each year, from November 16, 2004 until May 16, 2011. Beginning on May 16, 2011, the original issue discount will accrue daily at a rate of 2.375% per year on a semi-annual bond equivalent basis and, on the maturity date, a holder will receive $1,000 per note. As a result, the aggregate principal amount of the notes at maturity will be $247.4 million.

The deferred debt issuance costs of $2.1 million, net of $2.2 million in amortization, are included in Other assets on the consolidated balance sheet as of December 29, 2007. The deferred debt issuance costs are amortized on a straight line basis until May 2011 at which point the Company can redeem the debt. These charges are included in Interest expense on our consolidated statements of operations.

Holders of the senior subordinated convertible notes may convert their convertible notes into shares of our common stock at a conversion rate of 29.4652 shares per $1,000 principal amount of senior subordinated convertible notes, which represents a conversion price of $19.72 per share, subject to adjustments upon the occurrence of certain events. Holders have been and are able to convert their convertible notes at any point after the close of business on September 30, 2004 if, as of the last day of the preceding the calendar quarter, the closing price of our common stock for at least 20 trading days in a period of 30 consecutive trading days ending on the last trading day of such preceding calendar quarter is more than 120% of the accreted conversion price per share of our common stock. Holders may surrender their senior subordinated convertible notes for conversion on or before May 16, 2029 during the five business day period after any five consecutive trading day period in which the trading price per note for each day of that period was less than 98% of the product of the closing sale price of our common stock and the conversion rate on each such day. However, in such event, if on the day before any conversion the closing sale price of our common stock is greater than the accreted conversion price (i.e., the issue price of the note plus accrued original issue discount divided by the conversion rate) but less than or equal to 120% of the accreted conversion price, instead of shares of our common stock based on the conversion rate, holders will receive cash or common stock, or a combination of each at our option, with a value equal to the accreted principal amount of the notes plus accrued but unpaid interest as of the conversion date. Additionally, holders may convert their senior subordinated convertible notes if we call them for redemption or if specified corporate transactions or significant distributions to holders of our stock have occurred. As of December 29, 2007, no notes had been converted or called.

Holders may require us to repurchase all or a portion of their senior subordinated convertible notes on each of May 16, 2011, 2014, 2019, 2024 and 2029 at a repurchase price equal to 100% of the issue price, plus accrued original issue discount, if any. In addition, if we experience a change in control or a termination of trading of our common stock each holder may require us to purchase all or a portion of such holder s notes at the same price, plus, in certain circumstances, a make-whole premium. This premium is considered an embedded derivative under SFAS No. 133 and has been bifurcated from the senior subordinated convertible notes and recorded at its estimated fair value, $0.1 million and $0.2 million at December 29, 2007 and December 30, 2006, respectively. There are significant variables and assumptions used in valuing the make-whole provision including, but not limited to, the Company s stock price, volatility of the Company s stock, the probability of our being acquired and the probability of the type of consideration used by a potential acquirer.

We may redeem either in whole or in part, any of the senior subordinated convertible notes, at any time beginning May 16, 2011, by giving the holders at least 30 days notice, either in whole or in part at a redemption price equal to the sum of the issue price and the accrued original issue discount.

The senior subordinated convertible notes are subordinated to all of our senior indebtedness and structurally subordinated to all indebtedness of our subsidiaries. Therefore, in the event of a bankruptcy, liquidation or dissolution of us or one or more of our subsidiaries and acceleration of or payment default on our senior indebtedness, holders of the convertible notes will not receive any payment until holders of any senior indebtedness we may have outstanding have been paid in full. The convertible shares are not included in the earnings per share calculation, because they are antidilutive.

The aggregate fair value of the convertible notes at December 29, 2007, based on market quotes, was $164.9 million.

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10. Share-Based Compensation

Effective January 1, 2006 we adopted SFAS No. 123(R), utilizing the modified prospective transition method. Prior to the adoption of SFAS No. 123(R), we accounted for share-based compensation to employees using the intrinsic value method in accordance with APB No. 25 and accordingly recognized stock compensation expense with restricted stock grants.

Under the modified prospective transition method, SFAS No. 123(R) applies to new awards and to awards that were outstanding on January 1, 2006 that are subsequently modified, repurchased or cancelled based on the grant-date fair value estimated in accordance with the provisions of SFAS No. 123(R) as adjusted for estimated forfeiture rates. Additionally, compensation cost recognized in 2006 includes compensation cost for all share-based payments awards prior to, but not yet vested as of, January 1, 2006, based on the grant-date fair value estimated in accordance with the original provisions of SFAS No. 123. Prior periods were not restated.

Share-based compensation expense is measured based on the grant-date fair value of the share-based awards. We recognize share-based compensation expense for the portion of the award that will ultimately be expected to vest over the requisite service period for those awards with graded vesting and service conditions. We develop an estimate of the number of share-based awards, which will ultimately vest primarily based on historical experience. The estimated forfeiture rate is re-assessed periodically throughout the requisite service period. Such estimates are revised if they differ materially from actual forfeitures. As required, the forfeiture estimates will be adjusted to reflect actual forfeitures when an award vests.

Share-based compensation has been classified in the income statement or capitalized on the balance sheet in the same manner as compensation that is paid to our employees. Share-based compensation expense for the fiscal year ending 2007 and 2006 was $11.4 million and $9.6 million, respectively. As of 2007 and 2006, share-based compensation expense of $0.7 million and $0.5 million, respectively, was capitalized to inventory.

We receive a tax deduction for certain stock option exercises during the period the options are exercised, generally for the excess of the fair market value of the options at the date of exercise over the exercise prices of the options. Prior to the adoption of SFAS No. 123(R), we reported all tax benefits resulting from the exercise of stock options as operating cash flows in our consolidated statements of cash flows. In accordance with SFAS No. 123(R), beginning in 2006, our consolidated statements of cash flows presentation reports the excess tax benefits from the exercise of stock options as financing cash flows of $2.0 million and $1.8 million for fiscal years ending 2007 and 2006, respectively.

Cash proceeds from the exercise of stock options were $14.0 million and cash proceeds from our employee stock purchase plan were $2.0 million for the fiscal year ended December 29, 2007. Cash proceeds from the exercise of stock options were $13.4 million and cash proceeds from our employee stock purchase plan were $1.7 million for the fiscal year ended December 30, 2006. The actual income tax benefit realized from stock option exercises was $3.3 million and $2.8 million for the fiscal years ended December 29, 2007 and December 30, 2006, respectively.

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The following table illustrates the effect on operating results and per share information had we accounted for our share-based compensation plans in accordance with SFAS No. 123, rather than using the intrinsic value method in accordance with APB No. 25, for fiscal year 2005:

		2005 (in thousands, except per share data)
Net income :		
As reported	$	13,198
Add: Share-based compensation expense included in reported net income, net of related tax effects		1,412
Deduct: Total share-based compensation expense determined under fair value based method for all awards, net of related tax effects		(6,793)
Pro forma net income	$	7,817
Basic and Diluted net income per share:		
As reported		
Basic	$	0.27
Diluted	$	0.26
Pro forma		
Basic	$	0.16
Diluted	$	0.15

Equity Plans

In 1993, our Board of Directors approved the 1993 Stock Option Plan (1993 SOP), which permitted us to grant options to purchase up to 666,667 shares of our common stock. This plan expired in 2003 and no options were granted after its expiration. Prior to its expiration, all available options under the plan were granted.

In 1996, the Board of Directors and our shareholders approved the 1996 Stock Option Plan (1996 SOP) and the 1996 Non-employee Directors Stock Option Plan (Directors Option Plan). The Directors Option Plan was amended by the Board of Directors in November 1996, amended again by approval of our shareholders in May 1997, amended again by approval of our shareholders in May 1999, amended again by the Board of Directors in February 2003, amended again by approval of our shareholders in May 2003, and amended again by the Board of Directors in October 2003. The 1996 SOP consists of two parts. Part One permitted us to grant options to purchase up to 500,000 shares of common stock. This plan expired in February 2006. Part Two related to the former Chief Executive Officer, D. Keith Grossman, and permitted us to grant non-qualified options to Mr. Grossman to purchase up to 333,333 shares of common stock, all of which were granted in 1996. The Directors Option Plan, as amended, permitted us to grant options for a total of up to 550,000 shares of our common stock and provided for an initial grant to a director of an option to purchase 15,000 shares upon appointment to the Board, and annual grants thereafter to purchase 7,500 shares (granted in four equal installments). Provisions also include immediate vesting of both the initial and annual grants and a five year term of the options. In addition, the plan administrator has been provided with the discretion to impose any repurchase rights in our favor on any optionee. The Directors Option Plan expired in February 2006 and no options were granted under the Directors Option Plan in 2007.

In 1997, the Board of Directors adopted the 1997 Stock Option Plan (1997 SOP). The 1997 SOP was amended by approval of our shareholders in February 2001, amended by the Board of Directors in December 2001, amended again by approval of our shareholders in May 2003, and amended again by the Board of Directors in March 2006. The 1997 SOP allowed us to grant up to a total of 13.7 million shares of common stock in the form of stock options, restricted stock awards, and stock bonuses. This plan expired in May 2006 and no options were granted under the 1997 SOP in

2007.

In April 2006, the Board of Directors approved the 2006 Incentive Stock Plan (2006 Plan), and in May 2006 the 2006 Plan was amended by the Board of Directors and approved by our shareholders. The 2006 Plan allows us to grant to employees and directors of, and consultants to, the Company up to a total of 2.2 million shares of common stock in the form of options, restricted stock bonuses, restricted stock purchases, restricted stock units, stock appreciation rights, phantom stock units, performance share bonuses, and performance share units. The 2006 Plan stipulates that no more than 50% of the authorized shares may be issued as restricted stock bonuses, restricted stock units, phantom stock units, performance share bonuses or performance share units. During the fiscal year ended 2007, approximately 583,000 options were granted under the 2006 Plan at fair market value and approximately 585,000 shares of restricted stock and restricted stock units were granted under this plan. At December 29, 2007, approximately 813,000 shares remained available for grant under the 2006 Plan.

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Stock Options

Five of the common stock option plans or equity incentive plans described above had options outstanding at December 29, 2007, with only the 2006 Plan available for future grants. Options under the 2006 Plan may be granted by the Board of Directors at the fair market value on the date of grant and generally become fully exercisable within four years after the grant date and expire between five and ten years from the date of grant. Vesting on options granted to officers will be accelerated in certain circumstances following a change in control of the Company.

The fair value of each option granted is estimated at the date of grant using the Black-Scholes option pricing model. The risk-free interest rate is based on the United States Treasury yield curve in effect at the time of grant. Expected volatilities are based on the historical volatility of our stock. The expected term of options represents the period of time that options are expected to be outstanding. Beginning in 2006, we used separate assumptions for groups of employees (for example, officers) that have similar historical exercise behavior. The range below reflects the expected option impact of these separate groups.

The fair value of each option granted is estimated at the date of grant using the Black-Scholes option pricing model with the following assumptions used for grants made:

	For the Fiscal Years Ended		
	2007	**2006**	**2005**
Risk-free interest rate	4.79%	4.54%	4.20%
Expected volatility	40%	40%	45%
Expected option life	5.08-6.05 years	3.85-5.24 years	3.74 years
Dividends	None	None	None

At December 29, 2007, there was $5.1 million of unrecognized compensation expense related to stock options, which expense we expect to recognize over a weighted average period of 1.29 years. The aggregate intrinsic value of vested and expected to vest options outstanding, based on a market price of the Company s common stock on December 28, 2007, the last trading day of 2007, of $18.28 was $20.7 million, and the aggregate intrinsic value of options exercisable was $19.5 million. The total intrinsic value of options exercised was $9.1 million and $6.5 million for the fiscal years ended December 29, 2007 and December 30, 2006, respectively.

Stock option activity is summarized as follows:

	Number of Options (in thousands)		**Weighted Average Exercise Price Per Share**	**Weighted Average Remaining Contract Life (years)**
Outstanding at fiscal year end 2004 (5,111 exercisable at $11.38 weighted average price per share)	10,276	$	11.97	5.26
Granted ($5.45 weighted average grant date fair value per share)	609		14.65	
Cancelled and expired	(931)		13.77	
Exercised	(3,509)		10.44	
Outstanding at fiscal year end 2005 (3,574 exercisable at $12.64 weighted average price per share)	6,445	$	12.80	5.91
Granted ($8.12 weighted average grant date fair value per share)	1,625		20.72	

Cancelled and expired	(406)		15.50	
Exercised	(1,079)		12.46	
Outstanding at fiscal year end 2006 (4,064 exercisable at $12.75 weighted average price per share)	6,585	$	14.65	6.74
Granted ($8.12 weighted average grant date fair value per share)	583		18.32	
Cancelled and expired	(242)		17.70	
Exercised	(1,178)		11.91	
Outstanding at fiscal year end 2007 (3,940 exercisable at $13.72 weighted average price per share)	5,748	$	15.46	6.19

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Options outstanding as of fiscal 2007 year ended are summarized as follows:

	Options Outstanding (in thousands, except contractual life and exercise price)			Options Exercisable	
Exercise Price Range	Number Outstanding	Weighted Average Remaining Contractual Life (In Years)	Weighted Average Exercise Price	Number Outstanding	Weighted Average Exercise Price
$ 5.50 - $ 9.38	597	3.52	$ 8.49	595	$ 8.49
9.40 - 11.97	482	5.05	10.62	400	10.66
11.98 - 12.45	1,028	6.23	12.44	1,016	12.44
12.61 - 14.70	626	5.49	13.91	561	13.91
14.74 - 15.51	136	5.99	15.26	86	15.19
15.55 - 15.75	612	4.12	15.75	612	15.75
15.88 - 17.91	833	7.99	17.33	245	16.44
18.01 - 20.17	139	6.80	19.35	75	19.38
20.34 - 20.34	645	8.10	20.34	161	20.34
20.60 - 33.05	650	7.79	23.40	189	24.39
	5,748	6.19	15.46	3,940	13.72

Restricted Stock

The 1997 SOP allowed and the 2006 Plan allows for the issuance of restricted stock awards and restricted stock units, which awards or units may not be sold or otherwise transferred until certain restrictions have lapsed. The unearned share-based compensation related to these awards is being amortized to compensation expense over the period of the restrictions, generally four years. The expense for these awards was determined based on the market price of our shares on the date of grant applied to the total number of shares that were granted.

During fiscal 2007, we issued restricted stock to employees and directors under the 2006 Plan. Share-based compensation expense related to these restricted stock grants was $4.2 million for the fiscal year ended December 29, 2007. As of December 29, 2007, we had $9.0 million of unrecognized compensation expense associated with these restricted stock awards, which amount we expect to recognize over a weighted average period of 2.91 years. The total fair value of the shares granted during the fiscal year ended December 29, 2007 was $10.5 million.

The following table summarizes the restricted stock award activity in the years ended 2006 and 2007:

	Number of Shares (in thousands)	Weighted Average Grant Date Fair Value
Outstanding unvested restricted stock at December 31, 2005	150	14.89
Granted	448	18.03
Vested	(157)	15.89
Forfeited or expired	(19)	19.90
Outstanding unvested restricted stock at December 30, 2006	422	$ 17.63
Granted	570	18.39

Vested	(165)		16.93
Forfeited or expired	(59)		18.31
Outstanding unvested restricted stock at December 29, 2007	768	$	18.29

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Restricted Stock Units

During fiscal 2007, we issued restricted stock units to non-U.S. employees under the 2006 Plan. Share-based compensation expense related to these restricted units grants was $0.1 million for the fiscal year ended December 29, 2007. As of December 29, 2007, we had $0.2 million of unrecognized compensation expense associated with these restricted stock unit awards. The total fair value of the restricted stock units granted during the fiscal year ended December 29, 2007 was $0.3 million.

Restricted stock unit activity is summarized as follows:

	Number of Units (in thousands)	Weighted Average Grant Date Fair Value	Weighted Average Remaining Contract (in years)
Outstanding units at December 31, 2005		$	
Granted	10	19.08	
Released			
Forfeited or expired			
Outstanding units at December 30, 2006	10	$ 19.08	1.74
Granted	15	18.27	
Released	(3)	19.10	
Forfeited or expired	(1)	18.14	
Outstanding units at December 29, 2007	21	$ 18.58	2.82

Employee Stock Purchase Plan

In May 2002, our shareholders approved the Company s ESPP under which 500,000 shares of common stock had been reserved for issuance. In addition, the ESPP provides for an annual increase of up to 250,000 shares in the total number of shares available for issuance under the ESPP on March 1 of each year. The number of shares available for issuance under the ESPP was increased by 250,000 shares in March 2006, but was not increased in 2007. Every six months, eligible employees may purchase a limited number of shares of the Company s stock at 85% of the lower of the market value at the offering date or market value on the purchase date. Approximately 137,300 shares of common stock were issued in 2007 for $2.0 million. Approximately 118,200 shares of common stock were issued in 2006 for $1.7 million. As of the end 2007, approximately 81,800 shares remained available for issuance under this plan.

The estimated subscription date fair value of the current offering under the ESPP for fiscal years 2007 and 2006 were approximately $0.3 million and $0.9 million, respectively, using the Black-Scholes option pricing model and the following assumptions:

	For the Fiscal Years Ended		
	2007	2006	2005
Risk-free interest rate	4.80%	4.83%	3.09%
Expected volatility	40%	40%	48%
Expected option life	0.50 years	0.50 years	0.50 years
Dividends	None	None	None

At December 29, 2007, there was approximately $0.2 million of unrecognized compensation expense related to ESPP subscriptions that began on November 1, 2007, which amount we expect to recognize during the first four months of 2008.

11. Common and Preferred Stock

We have authorized 100 million shares of no par common stock, and 2.5 million shares of no par preferred stock, of which 540,541 shares have been designated Series A, 500,000 shares have been designated Series B and 100,000 shares have been designated Series RP.

The Series A preferred stock is entitled to cumulative annual dividends of $1.30 per share and has a liquidation preference of $9.25 per share plus cumulative unpaid dividends. We may redeem the Series A preferred stock at any time for its liquidation preference. Each share of Series A preferred stock is convertible into one-third of a share of common stock, after adjusting for earned but unpaid dividends. At December 29, 2007, no shares of Series A preferred stock were outstanding.

The Series B preferred stock is senior to the Series A in all preferences. Series B preferred stock is entitled to cumulative annual dividends of $0.96 per share and has a liquidation preference of $8.00 per share plus cumulative unpaid dividends. The Series B preferred stock is redeemable by us five years after its issuance for its liquidation preference. Each share of Series B preferred stock is convertible at any time into three and one-third shares of common stock and has certain anti-dilution provisions. Series B preferred shares vote on an as-converted basis. At December 29, 2007, no shares of Series B preferred stock were outstanding.

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On May 2, 2002, we adopted a shareholder rights plan, which we call the Rights Plan. Under the Rights Plan, we distributed one purchase right for each share of common stock outstanding at the close of business on May 17, 2002. If a person or group acquires 15% or more of our common stock in a transaction not pre-approved by our Board of Directors, each right will entitle its holder, other than the acquirer, to buy our common stock at 50% of its market value for the right s then current exercise price (initially $70.00). In addition, if an unapproved party acquires more than 15% of our common stock, and our Company or our business is later acquired by the unapproved party or in a transaction in which all shareholders are not treated alike, shareholders with unexercised rights, other than the unapproved party, will be entitled to purchase common stock of the acquirer with a value of twice the exercise price of the rights. Each right also becomes exercisable for one one-thousandth of a share of our Series RP preferred stock at the right s then current exercise price ten days after an unapproved third party makes, or announces an intention to make, a tender offer or exchange offer that, if completed, would result in the unapproved party acquiring 15% or more of our common stock. Our Board of Directors may redeem the rights for a nominal amount at any time before an event that causes the rights to become exercisable. The rights will expire on May 2, 2012.

In connection with the Rights Plan, we designated 100,000 no par shares of Series RP preferred stock. These shares, if issued, will be entitled to receive quarterly dividends and liquidation preferences. There are no shares of Series RP preferred stock issued and outstanding and we do not anticipate issuing any shares of Series RP preferred stock except as may be required under the Rights Plan.

12. Retirement Savings Plan

Substantially all of our full-time employees are eligible to participate in a 401(k) retirement savings plan (the Retirement Plan). Under the Retirement Plan, employees may elect to contribute up to 25% of their eligible compensation to the Retirement Plan with Thoratec making discretionary matching contributions, subject to certain IRS limitations. In each of fiscal 2007, 2006 and 2005, our matching contribution was 50%, up to the first 6% of eligible employee plan compensation. Employees vest in our matching contribution to the Retirement Plan at the rate of 25% per year, with full vesting after four years of service with us. In fiscal 2007, 2006 and 2005, we made contributions to the Retirement Plan of approximately $1.0 million, $1.2 million and $0.9 million, respectively.

In 2004, we established a non-qualified, unfunded deferred compensation plan for certain management employees and our Board of Directors. Amounts deferred and contributed under the deferred compensation plan are credited or charged with the performance of investment options offered under the plan and elected by the participants. The liability for compensation deferred under this plan was $1.8 million and $1.6 million at December 29, 2007 and December 30, 2006, respectively, and is included in Other long-term on our consolidated balance sheets. We manage the risk of changes in the fair value of the liability for deferred compensation by electing to match our liability under the plan with an investment that offsets a substantial portion of the Company s exposure. The cash value of the investment, which includes funding for future deferrals, was $2.2 million at both December 29, 2007 and December 30, 2006, and is included in Other assets on our consolidated balance sheets.

13. Taxes on Income

The provision for income tax expense (benefit) is as follows:

	For the Fiscal Years Ended		
	2007	2006	2005
	(in thousands)		
Current:			
Federal	$ 5,284	$ 116	$ 2,647
State	1,968	747	1,687
Foreign	1,179	1,069	980
	8,431	1,932	5,314
Deferred:			
Federal	(8,146)	(2,095)	1,631

State	(1,300)	(1,350)	(2,090)
Foreign	122	50	
	(9,324)	(3,395)	(459)
Total income tax provision (benefit)	$ (893)	$ (1,463)	$ 4,855

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The domestic and foreign components of income before income taxes are as follows:

	For the Fiscal Years Ended		
	2007	2006	2005
	(in thousands)		
Domestic	$ (1,619)	$ (2,072)	$ 14,857
Foreign	3,961	4,582	3,196
Income before income taxes	$ 2,342	$ 2,510	$ 18,053

The provision for income taxes in the accompanying statements of operations differs from the provision calculated by applying the U.S. federal statutory income tax rate of 35% to income before taxes due to the following:

	For the Fiscal Years Ended					
	2007		2006		2005	
	(in thousands, except percentages)					
U.S. federal statutory income tax expense	$ 820	35.0%	$ 878	35.0%	$ 6,318	35.0%
State income tax expense/(benefit), net of federal tax expense or benefit	(415)	(17.7)	(258)	(10.3)	(421)	(2.3)
Share-based compensation	910	38.9	1,657	66.0	341	1.8
Non-deductible expenses	291	12.5	258	10.3	253	1.4
Research and development and other credit carryforwards	(436)	(18.6)	(399)	(15.9)	(432)	(2.3)
Foreign earnings permanently reinvested	(58)	(2.5)	(483)	(19.2)		
Tax advantaged investment income	(2,560)	(109.3)	(1,606)	(64.0)	(1,204)	(6.7)
Return-to-provision true-up	552	23.6	(1,059)	(42.2)		
ARB 51 true-up			(336)	(13.4)		
In process research and development			392	15.6		
Extraterritorial income exclusion			(315)	(12.5)		
Domestic production activities	(123)	(5.3)	(50)	(2.1)		
Tax reserves	126	5.4	(142)	(5.6)		
	$ (893)	(38.0)%	$ (1,463)	(58.3)%	$ 4,855	26.9%

Deferred income taxes reflect the net tax effects of: (a) temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes, and (b) operating loss and tax credit carryforwards.

Significant components of deferred taxes are as follows:

	As of Fiscal Year Ended	
	2007	2006
	(in thousands)	
Deferred tax assets:		

Write-off of acquired technology	$ 506	$ 628
Reserves and accruals	3,964	1,334
Depreciation and amortization	1,543	1,066
Inventory basis difference	3,023	2,721
Share based compensation	3,651	1,656
Research and development and other credit carryforwards	5,697	6,501
Other, net	110	117
Total deferred tax assets	18,494	14,023
Deferred tax liabilities:		
Purchased intangibles	(48,100)	(52,765)
Other, net	(211)	(50)
Total deferred tax liabilities	(48,311)	(52,815)
Net deferred tax liabilities	$ (29,817)	$ (38,792)

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At the end of 2007, we had available tax carryforwards as follows:

Federal alternative minimum tax credits of approximately $1.0 million which may be carried forward indefinitely; and

Research and development tax credits for federal and state income tax purposes of approximately $4.0 million and $6.0 million, respectively. Federal research and development tax credit carryforwards expire from 2010 through 2027. State research and development tax credits generally carry-over indefinitely.

We believe realization of all of our net deferred tax assets as of December 29, 2007 is more likely than not based on the future reversal of temporary tax differences and upon future taxable earnings exclusive of reversing temporary differences.

We have utilized the short-cut method for purposes of determining our hypothetical stock option pool under SFAS No. 123(R). At December 29, 2007 the stock option pool was $7.4 million.

The federal, state and foreign provisions do not reflect certain tax savings resulting from tax benefits associated with our various stock option plans. These savings have been credited to additional paid-in-capital and were $3.3 million, $2.8 million and $7.5 million in fiscal 2007, 2006 and 2005, respectively.

We provide U.S. income taxes on the earnings of foreign subsidiaries unless such earnings are considered permanently reinvested in their respective foreign jurisdictions. At December 29, 2007, the cumulative earnings on which U.S. income taxes have not been provided were approximately $6 million. A determination of the potential deferred tax liability which would result from these earnings is not practicable at this time. Foreign earnings were considered to be permanently reinvested in operations outside the United States through 2007.

At December 30, 2006, we were under examination by the State of New Jersey for the years 1997 through 2000. In January 2007, we settled this claim for $1.0 million, and extinguished our corresponding liability in our consolidated financial statements in the first quarter of 2007. We are also currently under examination by the states of California and Massachusetts for our 2003 and 2004 years.

We adopted FIN 48 on December 31, 2006. Under FIN 48, tax positions are evaluated for recognition using a more-likely-than-not recognition threshold, and those tax positions eligible for recognition are measured as the largest amount of tax benefit that is greater than fifty percent likely of being realized upon the effective settlement with a taxing authority that has full knowledge of all relevant information. As a result of the implementation of FIN 48, the Company recognized an increase in the liability for unrecognized tax benefits, which increased approximately $0.5 million to the December 31, 2006 accumulated deficit balance.

A reconciliation of the beginning and ending amount of unrecognized tax benefits is as follows:

		(in thousands)
Balance at December 31, 2006	$	9,300
Additions based on tax positions related to the current year		445
Additions for tax positions		264
Reductions for tax positions		(2,627)
Settlements		(527)
Reductions for statute of limitations lapses		(2)
Balance at December 29, 2007	$	6,853

Included in the unrecognized tax benefits balance at December 29, 2007, are $2.5 million of unrecognized tax benefits which, if recognized, would impact the Company s effective tax rate.

Our policy for classifying interest and penalties associated with unrecognized income tax benefits is to include such items in income tax expense. During the year ended December 29, 2007, the Company recognized approximately $0.1 million and nil in interest and penalties, respectively, in its statement of operations. The Company had accrued approximately $0.5 million and $0.1 million for the payment of interest and penalties, respectively, in its consolidated

balance sheet as of at December 29, 2007.

The Company had accrued approximately $0.4 million and nil for the payment of interest and penalties, respectively, in its consolidated balance sheet as of December 30, 2006. This accrual was reported in a period prior to the adoption of FIN 48 and was therefore included in the Company s income tax reserves on a net of tax basis in the amount of $0.2 million and nil for interest and penalties, respectively.

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We classified changes to current income taxes separately, on our consolidated cash flows for the fiscal years ended 2007, 2006 and 2005. This change did not impact our net cash provided by operating activities for the years presented.

The Company files tax returns in the U.S., U.K., California, New Jersey and other jurisdictions. In general, the years 2004 through 2007 remain open to examination for U.S. purposes, 2005 through 2007 for UK purposes, and 2003 through 2007 for California and New Jersey purposes. In 2008, it is reasonably possible that we will file or amend our tax returns in certain jurisdictions, settle existing audits or close certain years to examination under the relevant statute of limitations which may further decrease our liability for unrecognized tax benefits by approximately $0.1 million. Substantially all of this decrease would result from the Company s filing of back tax returns in a foreign jurisdiction for which income tax exposure likely exists.

We believe we have provided adequate amounts for anticipated tax audit adjustments in the U.S., state and other foreign tax jurisdictions based on our estimate of whether, and the extent to which, additional taxes and interest may be due. If events occur which indicate payment of these amounts are unnecessary, the reversal of the liabilities would result in tax benefits being recognized in the period when we determine the liabilities are no longer necessary. If our estimate of tax liabilities proves to be less than the ultimate assessment, a further charge to expense would result.

14. Enterprise and Related Geographic Information

We organize and manage our business by functional operating entities. Our functional entities operate in two segments: Cardiovascular and ITC. The Cardiovascular segment develops, manufactures and markets proprietary medical devices used for circulatory support and vascular graft applications. The ITC segment designs, develops, manufactures and markets point-of-care diagnostic test systems and incision devices. Long-lived asset are primarily held in the United States.

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Business segments:

	For the Fiscal Years Ended		
	2007	2006	2005
	(in thousands)		
Product sales:			
Cardiovascular	$ 144,220	$ 133,710	$ 125,181
ITC	90,560	80,423	76,531
Total product sales	$ 234,780	$ 214,133	$ 201,712
Income (loss) before taxes:			
Cardiovascular[a] [d]	$ 5,188	$ 5,326	$ 15,103
ITC[a][b][d]	6,787	5,733	13,657
Corporate [c] [d]	(14,172)	(12,277)	(10,759)
Litigation costs [e]		(447)	(95)
Total operating income (loss)	(2,197)	(1,665)	17,906
Other income and (expense):			
Interest expense	(4,085)	(4,276)	(4,090)
Interest income and other	8,624	8,451	4,237
Total income before taxes	$ 2,342	$ 2,510	$ 18,053
Total assets:			
Cardiovascular	$ 312,691	$ 319,604	$ 307,043
ITC	62,642	58,030	41,701
Corporate [c]	238,386	213,501	225,174
Total assets	$ 613,719	$ 591,135	$ 573,918
Depreciation and amortization[f]:			
Cardiovascular	$ 17,218	$ 17,051	$ 16,728
ITC	4,174	2,991	2,160
Corporate [c]	444	250	
Total depreciation and amortization	$ 21,836	$ 20,292	$ 18,888
Capital expenditures [f]:			
Cardiovascular	$ 5,654	$ 15,911	$ 5,692
ITC[d]	4,435	3,976	3,724
Corporate [c]	99	6,554	
Total capital expenditures	$ 10,188	$ 26,441	$ 9,416

(a) Amortization expense of $11.7 million,

$11.8 million and $11.0 million for the fiscal years ended 2007, 2006 and 2005 respectively, related to the Cardiovascular division. The ITC division had amortization expense of $0.9 million, $0.3 million and $0.2 million for 2007, 2006 and 2005, respectively.

(b) ITC includes in-process research and development expenses of $1.1 million in 2006.

(c) Represents unallocated items, not specifically identified to any particular business segment.

(d) Includes additional share-based compensation expense of $6.9 million, $3.0 million and $1.5 million for Cardiovascular, ITC and Corporate, respectively, for

the fiscal year ended 2007 and $5.5 million, $2.7 million and $1.4 million for Cardiovascular, ITC and Corporate, respectively, for the fiscal year ended 2006.

(e) Relates to litigation expenses not specifically identified to a particular business segment.

(f) Capital expenditures include inventory transfers of $3.7 million, $1.9 million and $1.3 million for fiscal 2007, 2006 and 2005 respectively.

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Geographic Areas:

	For the Fiscal Years Ended		
	2007	2006	2005
		(in thousands)	
Product sales:			
Domestic	$ 169,786	$ 162,089	$ 154,711
International	64,994	52,044	47,001
Total	$ 234,780	$ 214,133	$ 201,712

15. Litigation

Litigation costs consisted of the following:

	For the Fiscal Years Ended		
	2007	2006	2005
		(in thousands)	
Litigation	$	$ 447	$ 95

On August 3, 2004, a putative Federal securities law class action entitled *Johnson v. Thoratec Corporation, et al.* was filed in the U.S. District Court for the Northern District of California on behalf of purchasers of our publicly traded securities between April 28, 2004 and June 29, 2004. Subsequent to the filing of the *Johnson* complaint, additional complaints were filed in the same court alleging substantially similar claims. On November 24, 2004, the Court entered an order consolidating the various putative class action complaints into a single action entitled *In re Thoratec Corp. Securities Litigation* and thereafter entered an order appointing Craig Toby as Lead Plaintiff pursuant to the Private Securities Litigation Reform Act of 1995. On or about January 18, 2005, Lead Plaintiff filed a Consolidated Complaint. The Consolidated Complaint generally alleged violations of the Securities Exchange Act of 1934 by Thoratec, its former Chief Executive Officer, its former Chief Financial Officer and its former Cardiovascular Division President based upon, among other things, alleged false statements about the Company s expected sales and the market for HeartMate as a Destination Therapy treatment. The Consolidated Complaint sought to recover unspecified damages on behalf of all purchasers of the Company s publicly traded securities during the putative class period. On March 4, 2005, defendants moved to dismiss the Consolidated Complaint and that motion currently is pending.

On or about September 1, 2004, a shareholder derivative action entitled *Wong v. Grossman* was filed in the California Superior Court for Alameda County based upon essentially the same facts as the Federal securities class action suit referred to above. This action named the individual members of our Board of Directors, including the former Chief Executive Officer and certain other former and current executive officers of the Company, as defendants, and alleged that the defendants breached their fiduciary duties and wasted corporate assets, and that certain of the defendants traded in Thoratec securities while in possession of material nonpublic information.

On May 11, 2006, the U.S. District Court granted our motion to dismiss. The Plaintiff filed an amended complaint, and the parties proceeded to mediation. As the result of the mediation, the parties to both the Federal securities law putative class action and the state shareholder derivative action have executed and delivered stipulations of settlement pursuant to which they release litigation costs that were primarily comprised of costs associated with a Federal securities law putative class action, and a related shareholder derivative action. These stipulations released the named defendants in these actions from all pending actions in exchange for a total of $3.4 million, in the Federal securities law putative class action, and $0.3 million in addition to implementation of certain changes in our corporate governance policies in the state shareholder derivative action. These stipulations to the Federal securities law putative class action and the state shareholder derivative action were approved by the applicable courts on November 17, 2006 and November 21, 2006, respectively, and both have subsequently become final and non-appealable.

We accrued $0.3 million of litigation expense in the second quarter of 2006 for this settlement, which amount represented the remaining portion of the Company s self-insured retention. In 2007, there were no litigation expenses related to these suits.

From time to time we are involved in litigation arising out of claims in the normal course of business. Based on the information presently available, management believes that there are no claims or actions pending or threatened against us, the ultimate resolution of which will have a material adverse effect on our financial position, liquidity or results of operations, although the results of litigation are inherently uncertain and adverse outcomes are possible.

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16. Net Income Per Share

Basic net income per share is calculated by dividing net income by the weighted average number of common shares outstanding during the period. Diluted net income per share is calculated using the treasury stock method reflects the potential dilution that could occur if securities or other contracts to issue common stock were exercised or converted into common stock. Options to purchase 1.9 million, 1.9 million and 2.0 million shares of common stock were not included in the computation of diluted net income per share for fiscal 2007, 2006 and 2005, respectively, as their inclusion would have been anti-dilutive. In addition, the computation of diluted net income per share for fiscal 2007, 2006 and 2005 excludes the effect of assuming the conversion of our convertible notes, which are convertible at $19.72 per share, because their effect would have been anti-dilutive for the full year.

Basic and diluted net income per share were calculated as follows:

	For the Fiscal Years Ended		
	2007	2006	2005
	(in thousands, except per share data)		
Net income	$ 3,235	$ 3,973	$ 13,198
Weighted average number of common shares-Basic	53,493	52,155	49,359
Dilutive effect of stock-based compensation plans	1,296	1,115	1,649
Weighted average number of common shares-Diluted	54,789	53,270	51,008
Net income per share			
Basic	$ 0.06	$ 0.08	$ 0.27
Diluted	$ 0.06	$ 0.07	$ 0.26

17. Quarterly Results of Operations (Unaudited)

The following is a summary of our unaudited quarterly results of operations for 2007 and 2006:

	First	Second	Third	Fourth
	(in thousands, except per share data)			
Fiscal Year 2007				
Product sales	$57,310	$57,333	$56,055	$64,082
Gross profit	34,513	33,685	32,348	35,718
Net income (loss)	(275)	1,253	(1,408)	3,665
Net income (loss) per share				
Basic	$ (0.01)	$ 0.02	$ (0.03)	$ 0.07
Diluted	$ (0.01)	$ 0.02	$ (0.03)	$ 0.07
Fiscal Year 2006				
Product sales	$48,755	$54,783	$51,747	$58,848
Gross profit	28,647	32,129	29,669	35,040
Net income (loss)	(930)	337	1,490	3,076
Net income (loss) per share				
Basic	$ (0.02)	$ 0.01	$ 0.03	$ 0.06
Diluted	$ (0.02)	$ 0.01	$ 0.03	$ 0.05

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Item 9. ***Changes in and Disagreements with Accountants on Accounting and Financial Disclosure***

None.

Item 9A. ***Controls and Procedures***

Attached as exhibits to this Annual Report on Form 10-K are certifications of our Chief Executive Officer and Chief Financial Officer, which are required in accordance with Rule 13a-14 of the Securities Exchange Act of 1934, as amended (the Exchange Act). This Controls and Procedures section includes information concerning the controls and controls evaluation referred to in the certifications. This section should be read in conjunction with management s report on internal control over financial reporting as of December 29, 2007, set forth below, a more complete understanding of the topics presented.

Disclosure Controls and Procedures

An evaluation was performed under the supervision and with the participation of our management, including our Chief Executive Officer and Chief Financial Officer, of the effectiveness of the design and operation of our disclosure controls and procedures, as defined in Rule 13a-15(e) under the Exchange Act, as of December 29, 2007. The evaluation of our disclosure controls and procedures included a review of our processes and implementation and the effect on the information generated for use in this Annual Report on Form 10-K. In the course of this evaluation, we sought to identify any significant deficiencies or material weaknesses in our disclosure controls and procedures, to determine whether we had identified any acts of fraud involving personnel who have a significant role in our disclosure controls and procedures, and to confirm that any necessary corrective action, including process improvements, was taken. This type of evaluation is done quarterly so that our conclusions concerning the effectiveness of these controls can be reported in our periodic reports filed with the SEC. The overall goals of these evaluation activities are to monitor our disclosure controls and procedures and to make modifications as necessary. We intend to maintain these disclosure controls and procedures, modifying them as circumstances warrant.

Based on that evaluation, our management, including the Chief Executive Officer and Chief Financial Officer, concluded that as of December 29, 2007 the Company s disclosure controls and procedures, as defined in Rule 13a-15(e) under the Exchange Act, were effective to provide reasonable assurance that information required to be disclosed by us in the reports that we file or submit under the Exchange Act is recorded, processed, summarized, and reported within the time periods specified in the SEC s rules and forms, and to provide reasonable assurance that such information is accumulated and communicated to our management, including our principal executive officer, as appropriate to allow timely decisions regarding required disclosures.

Management s Report on Internal Control Over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting to provide reasonable assurance regarding the reliability of our financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles.

Management assessed our internal control over financial reporting as of December 29, 2007, the end of our fiscal year. Management based its assessment on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission. Management s assessment included evaluation of such elements as the design and operating effectiveness of key financial reporting controls, process documentation, accounting policies, and our overall control environment. This assessment is supported by testing and monitoring performed by our internal accounting and finance organization.

Based on our assessment, management has concluded that our internal control over financial reporting was effective as of December 29, 2007 to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external reporting purposes in accordance with generally accepted accounting principles. The results of management s assessment were reviewed with the Audit Committee.

Our independent registered public accounting firm, Deloitte & Touche LLP, has issued a report on our internal control over financial reporting, which is included in Item 8 of this Annual Report on Form 10-K.

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Changes to Internal Controls

There have been no changes in our internal controls over financial reporting during the quarter ended December 29, 2007 that have materially affected or are reasonably likely to materially affect our internal control over financial reporting.

Inherent Limitations on Controls and Procedures

Our management, including the Chief Executive Officer and the Chief Financial Officer, does not expect that our disclosure controls and procedures and our internal controls will prevent all error and all fraud. A control system, no matter how well designed and operated, can only provide reasonable assurances that the objectives of the control system are met. The design of a control system reflects resource constraints; the benefits of controls must be considered relative to their costs. Because there are inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that all control issues and instances of fraud, if any, within the Company have been or will be detected. As these inherent limitations are known features of the financial reporting process, it is possible to design into the process safeguards to reduce, though not eliminate, these risks. These inherent limitations include the realities that judgments in decision-making can be faulty and that breakdowns occur because of simple error or mistake. Controls can be circumvented by the individual acts of some persons, by collusion of two or more people, or by management override of the control. The design of any system of controls is based in part upon certain assumptions about the likelihood of future events. While our disclosure controls and procedures are designed to provide reasonable assurance of achieving their objectives, there can be no assurance that any design will succeed in achieving its stated goals under all future conditions. Over time, controls may become inadequate because of changes in conditions or deterioration in the degree of compliance with the policies or procedures. Because of the inherent limitations in a cost-effective control system, misstatements due to error or fraud may occur and not be detected.

We intend to review and evaluate the design and effectiveness of our disclosure controls and procedures on an ongoing basis and to improve our controls and procedures over time and to correct any deficiencies that we may discover in the future. While our Chief Executive Officer and Chief Financial Officer have concluded that, as of December 29, 2007, the design of our disclosure controls and procedures, as defined in Rule 13a-15(e) under the Exchange Act, was effective, future events affecting our business may cause us to significantly modify our disclosure controls and procedures.

Item 9B. Other Information

None.

PART III

Item 10. ***Directors, Executive Officers and Corporate Governance***

Certain information regarding our executive officers is included in Part I of this Annual Report on Form 10-K under the caption Our Executive Officers. All other information regarding directors, executive officers and corporate governance required by Item 10 is incorporated herein by reference from the information under the captions Board of Directors Structure and Compensation, Election of Directors, Section 16(a) Beneficial Ownership Reporting Compliance, Code of Ethics and Corporate Governance, and in other applicable sections in the definitive proxy statement to be filed with the Securities and Exchange Commission pursuant to Regulation 14A for our 2008 annual meeting of shareholders.

Item 11. ***Executive Compensation***

The information required by Item 11 is incorporated herein by reference from the information under the captions Board of Directors Structure and Compensation, Compensation Discussion and Analysis, Report of the Compensation and Option Committee of the Board of Directors and Executive Compensation in the definitive proxy statement to be filed with the Securities and Exchange Commission pursuant to Regulation 14A for our 2008 annual meeting of shareholders.

Item 12. ***Security Ownership of Certain Beneficial Owners and Management and Related Stockholders Matters***

The information required by Item 12 is incorporated herein by reference from the information under the captions Security Ownership of Certain Beneficial Owners and Management and Securities Authorized for Issuance Under Equity Compensation Plans in the definitive proxy statement to be filed with the Securities and Exchange Commission pursuant to Regulation 14A for our 2008 annual meeting of shareholders.

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Item 13. ***Certain Relationships and Related Transactions, and Director Independence***

The information required by Item 13 is incorporated herein by reference from the information under the caption Certain Transactions in the definitive proxy statement to be filed with the Securities and Exchange Commission pursuant to Regulation 14A for our 2008 annual meeting of shareholders.

Item 14. ***Principal Accounting Fees and Services***

The information required by Item 14 is incorporated herein by reference from the information under the caption Fees Paid to Accountants for Services Rendered During Fiscal Years 2007 and 2006 in the definitive proxy statement to be filed with the Securities and Exchange Commission pursuant to Regulation 14A for our 2008 annual meeting of shareholders.

PART IV

Item 15. ***Exhibit and Financial Statement Schedules***

(a) List of documents filed as part of this report:

1. Financial Statements and Reports of Independent Registered Public Accounting Firm.

Reference is made to the Index to Financial Statements under Item 8 of Part II of this Annual Report on Form 10-K, where these documents are included.

2. Financial Statement Schedules

Schedule II Valuation and Qualifying Accounts and Reserves for each of the three fiscal years ended December 29, 2007, December 30, 2006 and December 31, 2005. Other financial statement schedules are not included either because they are not required or the information is otherwise shown in our audited consolidated financial statements or the notes thereto.

3. Exhibits

Reference is made to the Exhibit Index on page 80 of this Annual Report on Form 10-K, where these documents are included.

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THORATEC CORPORATION
SCHEDULE II VALUATION AND QUALIFYING ACCOUNTS AND RESERVES
For Each of the Three Fiscal Years in the Period Ended December 29, 2007

	Balance Beginning of Year	Additions (charges to expense)	Deductions	Balance End of Year
		(in thousands)		
Year Ended December 29, 2007:				
Allowance for doubtful accounts	$491	$ 690	$(320)[1]	$861
Year Ended December 30, 2006:				
Allowance for doubtful accounts	$634	$ 14	$(157)[1]	$491
Year Ended December 31, 2005:				
Allowance for doubtful accounts	$708	$ 96	$(170)[1]	$634

(1) Accounts written off.

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EXHIBIT INDEX

Exhibit Number	Exhibit
3.1	Thoratec s Articles of Incorporation, as amended.(1)
3.2	Thoratec s By-Laws, as amended February 25, 2005.(2)
4.1	Rights Agreement between Thoratec Corporation and Computershare Trust Company, Inc. as Rights Agent dated as of May 2, 2002.(3)
4.2	Indenture, dated as of May 24, 2004, by and between Thoratec Corporation and U.S. Bank, National Association, as Trustee. (4)
4.3	Form of Senior Subordinated Convertible Note due 2034.(5)
4.4	Pledge Agreement, dated as of May 24, 2004, between Thoratec Corporation and U.S. Bank, National Association, and Pledge Agreement Supplement, dated as of June 7, 2004.(4)
4.5	Control Agreement, dated as of May 24, 2004, between Thoratec Corporation and U.S. Bank, National Association, and Control Agreement Amendment, dated as of June 7, 2004.(4)
4.6	Registration Rights Agreement, dated May 24, 2004, by and among Thoratec Corporation and Merrill Lynch Pierce Fenner & Smith Incorporated as Initial Purchaser of the Senior Subordinated Convertible Notes due 2034. (4)
10.1	Intellectual Property Cross-license Agreement between Thermedics and the Thoratec Cardiosystems dated August 19, 1988.(6)
10.2	Form of Indemnification Agreement between Thoratec Cardiosystems and its officers and directors.(6)
10.3	Thoratec s 1993 Stock Option Plan.(7)
10.4	Agreement dated May 26, 1993, between The Polymer Technology Group Incorporated and the Thoratec Cardiosystems.(8)
10.5	Thoratec s 1996 Stock Option Plan.(9)
10.6	Thoratec s 1996 Nonemployee Directors Stock Option Plan, as amended.(10)
10.7	Lease Agreement dated July 25, 1996, between Main Street Associates and Thoratec, as amended.(11)
10.8	First Amendment to Lease Agreement originally between Main Street Associates and Thoratec dated July 25, 1996.(12)
10.9	Second Amendment to Lease Agreement originally between Main Street Associates and Thoratec dated July 25, 1996.(1
10.10	Thoratec s 1997 Stock Option Plan, as amended.(14)
10.11	Lease agreement dated August 16, 1995, between International Technidyne Corporation and BHBMC, as amended.(15)
10.12	Thoratec s 2002 Employee Stock Purchase Plan.(16)

10.13	Grantor Trust Agreement between Thoratec and Wachovia Bank, National Association effective as of November 21, 2003.(10)
10.14	Commercial Lease between International Technidyne Corporation and Roseville Properties Management Company date September 26, 2003. (10)
10.15	Lease Agreement between International Technidyne Corporation and NJ Mortgage Association dated February 21, 2003 (18)
10.16	Description of the Executive Disability Income Protection Program.(17)
10.17	Purchase and Sale Agreement and Escrow Instructions dated September 2, 2005, by and between Thoratec and Aegis I, LLC.(19)

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Exhibit Number	Exhibit
10.18	Amended and Restated Thoratec Corporation 2006 Incentive Stock Plan.(20)
10.19	Offer Letter Agreement by and between Thoratec and David V. Smith dated November 22, 2006.(21)*
10.20	Amended and Restated Employment Agreement by and between Thoratec and Gerhard F. Burbach, dated April 23, 2007. (22)*
10.21	Amended and Restated Employment Agreement by and between Thoratec and Lawrence Cohen, dated April 23, 2007. (22)*
10.22	Amended and Restated Separation Benefits Agreement by and between Thoratec and David A. Lehman, dated April 23, 2007. (22)*
10.23	Amended and Restated Separation Benefits Agreement by and between Thoratec and David V. Smith, dated April 23, 2007. (22)*
10.24	Thoratec Corporation Amended and Restated Deferred Compensation Plan Effective January 1, 2005. (23)
21	Subsidiaries of Thoratec.(17)
23.1	Consent of Independent Registered Public Accounting Firm.
24	Power of Attorney Reference is made to page 80 hereof.
31.1	Section 302 Certification of Chief Executive Officer
31.2	Section 302 Certification of Chief Financial Officer
32.1	Section 906 Certification of Chief Executive Officer
32.2	Section 906 Certification of Chief Financial Officer

(1) Filed as an Exhibit to Thoratec s Annual Report on Form 10-K for the fiscal year ended December 28, 2002 filed with the SEC on March 20, 2003 and incorporated herein by reference.

(2) Filed as an Exhibit to Thoratec s Form 8-K filed with the SEC on March 3, 2005.

(3) Filed as an Exhibit to Thoratec s Form 8-A12G filed with the SEC on May 3, 2002 (Registration No. 000-49798), and incorporated herein by reference.

(4) Filed as an Exhibit to Thoratec s Quarterly Report on Form 10-Q for the fiscal quarter ended July 3, 2004 filed with the SEC on August 12, 2004, and incorporated herein by reference.

(5) Included as an exhibit to Exhibit 4.2.

(6) Filed as an Exhibit to Thoratec Cardiosystems Registration Statement on Form S-1 (Registration No. 33-25144) and incorporated herein by reference.

(7) Filed as an Exhibit to Thoratec s Annual Report on Form 10-K for the fiscal year ended January 1, 1994 filed with the SEC on March 22, 1994, and incorporated herein by reference.

(8) Filed as an Exhibit to Thoratec Cardiosystems Quarterly Report on Form 10-Q for the fiscal quarter ended July 3, 1993 and incorporated herein by reference.

(9) Filed as an Exhibit to Thoratec s Registration Statement on Form S-8 filed with the SEC on September 12, 1996, (Registration No. 333-11883) and incorporated herein by reference.

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(10) Filed as an Exhibit to Thoratec s Annual Report on Form 10-K for the fiscal year ended January 3, 2004 filed with the SEC on March 17, 2004 and incorporated herein by reference.

(11) Filed as an Exhibit to Thoratec s Quarterly Report on Form 10-Q for the fiscal quarter ended June 29, 1996, filed with the SEC on August 13, 1996, and incorporated herein by reference.

(12) Filed as an Exhibit to Thoratec s Quarterly Report on Form 10-Q for the fiscal quarter ended June 28, 1997, filed with the SEC on July 30, 1997, and incorporated herein by reference.

(13) Filed as an Exhibit to Thoratec s Quarterly Report on Form 10-Q for the fiscal quarter ended

September 27, 1997 filed with the SEC on November 12, 1997, and incorporated herein by reference.

(14) Filed as an Exhibit to Thoratec s Registration Statement on Form S-8 filed with the SEC on June 18, 2003 (Registration No. 333-106238), and incorporated herein by reference.

(15) Filed as an Exhibit to Thoratec s Form 10-K405 filed with the SEC on March 15, 2002 (Registration No. 033-72502), and incorporated herein by reference.

(16) Filed as an Exhibit to Thoratec s Form S-8 POS filed with the SEC on July 1, 2002 (Registration No. 333-90768), and incorporated herein by reference.

(17) Filed as an Exhibit to Thoratec s Annual Report on Form

10-K for the fiscal year ended January 1, 2005 filed with the SEC on March 16, 2005 and incorporated herein by reference.

(18) Filed as an Exhibit to Thoratec s Quarterly Report on Form 10-Q for the fiscal quarter ended March 29, 2003 filed with the SEC on May 13, 2003, and incorporated herein by reference.

(19) Filed as an Exhibit to Thoratec s Form 8-K filed with the SEC on September 8, 2005.

(20) Filed as an Exhibit to Thoratec s Form 8-K filed with the SEC on June 1, 2006.

(21) Filed as an Exhibit to Thoratec s form 8-K filed with the SEC on December 4, 2006.

(22) Filed as an Exhibit to Thoratec s Form 8-K filed with the

SEC on April 27, 2007.

(23) Filed as an Exhibit to Thoratec s Quarterly Report on Form 10-Q for the fiscal quarter ended June 30, 2007 filed with the SEC on August 9, 2007 and incorporated herein by reference.

* Indicates a management contract or compensatory plan.

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SIGNATURES

In accordance with Section 13 or Section 15(d) of the Exchange Act, as amended, the Registrant has duly caused this Form 10-K to be signed on its behalf by the undersigned, thereunto duly authorized on this 27th day of February 2008.

THORATEC CORPORATION

By: /s/ Gerhard F. Burbach
Gerhard F. Burbach
President and Chief Executive Officer

Date: February 27, 2008

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POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS that each person whose signature appears below constitutes and appoints Gerhard F. Burbach and David Lehman, and each of them, his true and lawful attorney-in-fact, with full power of substitution and resubstitution, to act for him and in his name, place and stead, in any and all capacities to sign any and all amendments to this annual report on Form 10-K and to file the same, with all exhibits thereto, and all documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing which they, or any of them, may deem necessary or advisable to be done in connection with this annual report as fully to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents or any of them, or any substitute or substitutes for any or all of them, may lawfully do or cause to be done by virtue hereof.

In accordance with the Exchange Act, this report has been signed below by the following persons on behalf of the Thoratec Corporation and in the capacities and on the dates indicated.

Signature	Title	Date
/s/ Gerhard F. Burbach Gerhard F. Burbach	Chief Executive Officer, President and Director	February 27, 2008
/s/ David V. Smith David V. Smith	Executive Vice President and Chief Financial Officer	February 27, 2008
/s/ Neil F. Dimick Neil F. Dimick	Director and Chairman of the Board of Directors	February 27, 2008
/s/ J. Donald Hill J. Donald Hill	Director and Vice Chairman of the Board of Directors	February 27, 2008
/s/ Howard E. Chase Howard E. Chase	Director	February 27, 2008
/s/ J. Daniel Cole J. Daniel Cole	Director	February 27, 2008
/s/ Steven H. Collis Steven H. Collis	Director	February 27, 2008
/s/ Elisha W. Finney Elisha W. Finney	Director	February 27, 2008
/s/ D. Keith Grossman	Director	February 27, 2008

D. Keith Grossman		
/s/ Daniel M. Mulvena	Director	February 27, 2008
Daniel M. Mulvena		