AMTECH SYSTEMS INC
Form S-1/A
November 13, 2007

As filed with the Securities and Exchange Commission on November 13, 2007

Registration No. 333-146856

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

AMENDMENT NO. 2

TO

FORM S-1

REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

AMTECH SYSTEMS, INC.

(Exact name of registrant as specified in its charter)

Arizona	**3559**	**86-0411215**
(State of incorporation)	(Primary Standard Industrial Classification Code No.)	(I.R.S. Employer Identification No.)

131 South Clark Drive
Tempe, Arizona 85281
(480) 967-5146

(Address, including zip code and telephone number, including area code of registrant□s principal executive offices)

Bradley C. Anderson
Vice President □ Finance, Chief Financial Officer
Amtech Systems, Inc.
131 South Clark Drive
Tempe, Arizona 85281
(480) 967-5146

(Name, address, including zip code and telephone number, including area code, of agent for service)

with copies to:

Christopher D. Johnson, Esq.
Scott I. Gruber, Esq.
Squire, Sanders & Dempsey L.L.P.
Two Renaissance Square
40 North Central Avenue, Suite 2700
Phoenix, Arizona 85004
(602) 528-4000

Jeffrey Harrell, Esq.
Gabriella Lombardi, Esq.
Pillsbury Winthrop Shaw Pittman LLP
2475 Hanover Street
Palo Alto, California 94304
(650) 233-4500

Approximate date of commencement of proposed sale to the public: As soon as practicable after this registration statement becomes effective.

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933 check the following box: o

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. o

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. o

If this Form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. o

CALCULATION OF REGISTRATION FEE

Title of Each Class of Securities to be Registered	Amount to be Registered (1)	Proposed Maximum Offering Price Per Share (2)	Proposed Maximum Aggregate Offering Price (2)	Amount of Registration Fee (3)
Common Stock, par value $0.01 per share	2,300,000 shares	$15.04	$34,592,000	$1,062

(1) Includes 300,000 shares of common stock that may be purchased by the underwriters to cover over-allotments, if any.
(2) Estimated solely for the purpose of calculating the amount of the registration fee, pursuant to Rule 457(c) under the Securities Act of 1933, as amended. The price per share and aggregate offering price are based on the average of the high and low sales prices for shares of common stock of Amtech Systems, Inc., on November 12, 2007, as reported on the NASDAQ Global Market.
(3) $1,195 was previously paid in satisfaction of the registration fee.

Subject to completion dated November 13, 2007

Preliminary Prospectus

2,000,000 Shares of Common Stock
$ Per Share

We are selling 2,000,000 shares of our common stock.

Our common stock trades on the NASDAQ Global Market under the symbol ASYS. On November 12, 2007 the last sale price of our common stock as reported on the NASDAQ Global Market was $14.45 per share.

We have granted the underwriters the right to purchase up to an additional 300,000 shares of common stock solely to cover over-allotments of shares.

Investing in our common stock involves a high degree of risk.
See "Risk Factors" beginning on page 10.

	Per Share	Total	Total if over-allotment option is exercised
Public offering price	$	$	$
Underwriting discount and commissions	$	$	$
Proceeds, to us (before expenses)	$	$	$

The underwriters expect to deliver the shares to purchasers on or about , 2007.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed upon the adequacy or accuracy of this prospectus. Any representation to the contrary is a criminal offense.

Collins Stewart LLC

Oppenheimer & Co. **Broadpoint.**

The date of this prospectus is , 2007.

TABLE OF CONTENTS

PROSPECTUS SUMMARY

This summary highlights selected information from this prospectus and does not contain all of the information that you need to consider in making your investment decision. You should read the entire prospectus, including the risks of investing discussed under "Risk Factors" beginning on page 10 and the following summary together with the more detailed information regarding our company, the shares, our financial statements and the notes to those statements and the exhibits to the registration statement of which this prospectus is a part.

References in this prospectus to "Amtech," the "Company," "we," "us," and "our," refer to Amtech Systems, Inc. and subsidiaries, unless otherwise specified.

OUR COMPANY

We are a leading supplier of horizontal diffusion furnace systems used for solar (photovoltaic) cell and semiconductor manufacturing, and are recognized in the markets we serve for our technology and our brands. We operate in two business segments: (i) semiconductor and solar equipment and (ii) polishing supplies. Our semiconductor and solar equipment is sold under the well-known and respected brand names of Tempress® Systems and Bruce Technologies, which have customers in both the semiconductor industry and the solar industry. Within the semiconductor industry, we provide equipment to manufacturers of analog, power, automotive and microcontroller chips with geometries greater than 0.3 micron, denoted as µ, a strategy we believe minimizes direct competition with significantly larger suppliers of semiconductor equipment. Within the solar industry, we provide diffusion and automation equipment to solar cell manufacturers. Under the PR Hoffman® brand, we believe we are also a leading supplier of insert carriers to manufacturers of silicon wafers, and we provide lapping and polishing consumable products as well as equipment used in various industries.

We have been providing manufacturing solutions to the semiconductor industry for over 30 years, and are leveraging our semiconductor technology and industry presence in an effort to capitalize on growth opportunities in the solar industry. Our customers use our furnaces to manufacture semiconductors, solar cells, silicon wafers and microelectromechanical systems, or MEMS, which are used in end markets such as telecommunications, consumer electronics, computers, automotive, hand-held devices and solar industry products. To complement our research and development efforts, we also sell our furnaces to research institutes and universities.

For the nine months ended June 30, 2007, we recognized net revenue of $32.9 million, which included $8.1 million of solar revenue or approximately 25% of our total revenues. These results compare to $29.2 million of net

revenue for the nine months ended June 30, 2006, which included $2.3 million of solar revenues or approximately 8% of our total revenues. Our order backlog as of June 30, 2007 and 2006 was $20.7 million and $13.5 million, respectively, a 53% increase. Our backlog as of June 30, 2007 included approximately $11.5 million of orders from our solar industry customers compared to $3.1 million of orders from our solar industry customers as of June 30, 2006. Because our orders are typically subject to cancellation or delay by the customer, our backlog at any particular point in time is not necessarily representative of actual sales in subsequent periods, nor is backlog any assurance that we will realize revenue or profit from completing these orders.

Orders from the solar industry, which consist of backlog and shipped orders, totaled $21.4 million during fiscal 2007, compared to $8.0 million and $3.8 million in fiscal 2006 and 2005, respectively.

Amtech Systems, Inc.
Solar Orders Growth
(in millions)

RECENT DEVELOPMENTS

Acquisition of Solar Cell Automation Technology. On October 8, 2007, through our wholly-owned subsidiary, Tempress Holding B.V., we acquired R2D Ingenierie, or R2D, a solar cell and semiconductor automation equipment manufacturing company, located in Montpellier, France. R2D has provided solutions to the solar and semiconductor industries since 1989 and recognized net revenue of $4.9 million in 2006. The automation products sold by R2D are used in several steps of the semiconductor manufacturing processes and for the solar diffusion process. We believe R2D's automation know-how provides a significant point of differentiation from our competitors and provides us the capability to expand the automation solutions we are able to provide to our current and future solar industry customers. We believe the acquisition of the technology and business of R2D enhances our growth strategy by allowing us to increase our sales by offering an integrated system under the Tempress brand to the solar industry.

Under the agreement, we acquired all of the outstanding shares of R2D for a total purchase price of approximately $6.1 million and made a working capital infusion of $1.0 million that was used to satisfy certain outstanding obligations. The purchase price includes significant contingent incentive provisions tied to R2D's successful product improvements, production and technology delivery. Additionally, R2D's key personnel have signed three-year employment agreements.

Partnering to Develop and Market an Antireflective Coating System for Solar Cells. In April 2007, we entered into a licensing and manufacturing agreement to develop and market an antireflective coating system for solar cells with PST Co., LTD., a South Korean producer of vertical thermal processing systems for high-end memory-chip semiconductor applications. This plasma enhanced chemical vapor deposition, or PECVD, system is used in high-volume solar cell manufacturing, and is an important step in the solar cell manufacturing process, as is our diffusion process. The licensing agreement allows us to market PST's existing and future PECVD systems to high-volume solar cell manufacturers throughout the term of the agreement, which we believe will enable us to develop new customer relationships. The royalty free, 10-year licensing agreement will enable us to sell this product to our solar customer base through our extensive global sales and marketing network on an exclusive basis, with the exception of sales in Korea and to one existing Japanese customer of PST, for which PST retains exclusive rights.

Expansion of Solar Manufacturing Plant Capacity. In March 2007, we acquired a 48,000 square foot manufacturing plant located in Vaassen, The Netherlands, near our existing plant where we currently manufacture the majority of our solar cell equipment. This facility, which will replace our current facility, significantly increases our European manufacturing capacity, and we believe it will improve the operating efficiencies of both our solar cell and semiconductor equipment manufacturing in fiscal 2008.

Penetration of the Asia-Pacific Market. We have continued to increase our sales into the Asia-Pacific market and we expect further growth in export opportunities to this region. In the nine months ended June 30, 2007, our sales into the Asia-Pacific market increased by 23% compared to the same period in 2006, driven primarily by sales to our solar industry customers. The Asia-Pacific region continues to be an important and expanding market for us because of the continued migration of solar cell and semiconductor manufacturing to countries in that market.

Partnering to Manufacture Advanced Vertical Microwave System. In May 2007, we entered into a manufacturing agreement with DSG Technologies, a California-based developer of low temperature, microwave heating and curing systems used in fabricating integrated circuits. Under this agreement we expect to manufacture a vertical microwave reactor system that utilizes both our small-batch vertical furnace platform and DSG□s microwave heating technology. This new product is designed to be used for the curing processes on advanced sub-50nm semiconductor devices.

SOLAR AND SEMICONDUCTOR INDUSTRIES

We provide products and services primarily to two industries: the solar industry and the semiconductor industry.

Solar Industry

Worldwide Demand For Solar Energy (Total Solar Cell Production)

Solar power has emerged as one of the most rapidly growing renewable energy sources. To date, various technologies have been developed to harness solar energy. The most significant technology is the use of interconnected photovoltaic, or PV, cells to generate electricity directly from sunlight. Most PV cells are constructed using specially processed silicon, which, when exposed to sunlight, generates direct current electricity. Solar energy has many advantages over other existing renewable energy sources and traditional non-renewable energy sources in the areas of environmental impact, delivery risk, distributed nature of generation and matching of peak generation with demand. According to *PHOTON International* published by Solar Verlag GmbH, an independent solar energy research publication, the global PV market, as measured by total PV cell production, increased from 1.2 gigawatts, or GW, in 2004 to 2.6 GW in 2006, which represents a compound annual growth rate, or CAGR, of approximately 36%. During the same period, PV industry revenues grew from approximately $8.0 billion to approximately $20.0 billion. *PHOTON International* projects that total PV cell production, including thin-film and non-conventional production which our products do not address, will increase from 4.0GW in 2007 to 20.5GW in 2011, representing a CAGR of approximately 50%. During the same period, PV industry revenues are projected to grow from approximately $30 billion to approximately $121 billion.

Despite this rapid growth, solar energy currently accounts for only a small fraction of the world□s energy output. We believe that growth in the PV industry will be driven by rising energy demand, the increasing scarcity of traditional energy resources coupled with rising prices, the growing adoption of government incentives for solar energy due

to increasing environmental awareness and concern about energy independence, the gradually decreasing cost of solar energy and the changing consumer preferences toward renewable energy sources. We believe the anticipated continued growth of the PV industry will result in increased investment in PV manufacturing

equipment.

Semiconductor Industry

The semiconductor industry has experienced significant yet cyclical growth since the early 1990s. This growth has been primarily attributable to an increase in demand for personal computers, the growth of the Internet, the expansion of the telecommunications industry, especially wireless communications, and the emergence of new applications in consumer electronics. Further fueling this growth is the rapidly expanding end-user demand for smaller, less-expensive and better-performing electronic products, as well as for traditional products with more intelligence. This growing demand has led to an increased number of semiconductor devices in electronic and other consumer products, including automobiles. The cyclical nature of the market is characterized by short-term periods of under- or over-supply for most semiconductors, including microprocessors, memory, power management chips and other logic devices.

COMPETITIVE STRENGTHS

We believe that we are a leader in the markets we serve as a result of the following competitive strengths:

Leading Market Share and Recognized Brand Names. The Tempress, Bruce Technologies and PR Hoffman brands have long been recognized in our industry and identified with high-quality products, innovative solutions and dependable service. We believe that our brand recognition and experience will continue to allow us to capitalize on current and future market opportunities in the solar industry.

We have been providing horizontal diffusion furnaces and polishing supplies and equipment to our customers for over 30 years. We have sold and installed over 900 horizontal furnaces worldwide and benefit from what we believe to be the largest installed customer base in the semiconductor industry, which we believe offers an opportunity for replacement and expansion demand. Customers that have purchased our furnaces can leverage their investment in training, spare parts inventory and other costs by acquiring additional equipment from us. We also have an extensive retrofit, parts and service business, which typically generates higher margins than our equipment business.

Experienced Management Team. We are led by a highly experienced management team. Our CEO has over 34 years of industry experience, including 26 years with our company. Our four general managers have an average of over 20 years of semiconductor and solar industry experience and an average of 18 years with our company (including our predecessor companies).

Established, Diversified Customer Base. We have long-standing relationships with many of our top customers, which we believe remain strong. We maintain a broad base of customers, including leading solar cell manufacturing companies, as well as semiconductor and wafer manufacturing companies. During the nine months ended June 30, 2007, our largest customer accounted for approximately 12% of our net revenue and our top 10 customers collectively represented approximately 52% of our net revenue. In fiscal 2006, our largest customer accounted for approximately 17% of our net revenue, and our top 10 customers collectively represented approximately 58% of our net revenue. In fiscal 2005, no single customer accounted for more than 10% of our net revenue. Our largest customer has been different in each of the last three fiscal years.

Proven Acquisition Track Record. Over the last twelve years, we have developed an acquisition program that has resulted in the acquisition of four significant businesses.

In October 2007, we acquired R2D Ingenierie, a solar and semiconductor automation company located in Montpellier, France. We believe the acquisition of the technology and business of R2D enhances our growth strategy by allowing us to increase our sales by offering an integrated system under the Tempress brand to the solar industry.

In July 2004, we acquired the Bruce Technologies line of semiconductor horizontal furnace operations, product lines and other assets from Kokusai Semiconductor Equipment Corporation, or Kokusai, a wholly owned subsidiary of Hitachi, Japan and its affiliate, Kokusai Electric Europe, GmbH.

In July 1997, we acquired substantially all of the assets of P.R. Hoffman Machine Products, Inc., or PR Hoffman. This acquisition enabled us to offer new products, including lapping and polishing carriers, polishing templates, lapping and polishing machines and related consumable and spare parts, to our existing customer base as well as to new customers.

In 1994, we acquired certain assets of Tempress Systems, Inc., or Tempress, and hired Tempress's engineers to develop our first models of the Tempress horizontal diffusion furnaces for production in The Netherlands.

Technical Expertise. We have highly trained and experienced mechanical, chemical, environmental, electronic, hardware and software engineers and support personnel. Our engineering group possesses core competencies in product applications and support systems, automation, sophisticated controls, chemical vapor deposition, diffusion and pyrogenic processes, robotics, vacuum systems, ultra clean applications and software driven control packages. We believe this expertise enables us to design, develop and deliver high-quality, technically-advanced integrated product solutions for solar cell and semiconductor manufacturing customers.

Leading Technology Solutions and New Product Development. We pursue a partnering-based approach, in which our engineering and development teams work closely with our customers to ensure our products are tailored to meet our customers' specific requirements. We believe this approach enables us to more closely align ourselves with our customers and to provide them with superior systems.

We believe our line of horizontal diffusion furnaces, which allow high wafer-per-hour throughput, is more technologically advanced and reliable than most of our competitors' equipment. In addition, the processing and temperature control systems within the furnace provide diverse and proven process capabilities, which enable the application of high-quality films onto silicon wafers. We believe our recently acquired R2D solar automation technology will provide efficiencies in the manufacturing process that will allow our customers to be more competitive in their respective markets.

We developed a small batch vertical furnace jointly with a major European customer and are currently developing five different thin film processes for use with this furnace. We retain full ownership of this technology. We shipped two of these systems in fiscal 2005 and one in fiscal 2006. In addition, in 2007, we shipped a small batch vertical furnace utilizing DSG's microwave technology to DSG.

In 2007, we also began selling precision thickness wafer carriers. This is an internally developed product that we expect will increase our sales to the wafer carrier market.

Geographically Diverse Customer Base. We believe that our geographically diverse revenue stream helps to minimize our exposure to fluctuations in any one market, and to maximize our access to potential customers relative to our competitors with geographically concentrated operations. The geographic distribution of our net revenues from fiscal 2004 through the nine months ended June 30, 2007 is as follows:

	Fiscal year Ended September 30,			Nine Months Ended June 30,
	2004	**2005**	**2006**	**2007**
Asia Pacific	33%	36%	41%	48%
North America	36%	40%	35%	29%
Europe	31%	24%	24%	23%

GROWTH STRATEGY

We intend to leverage our competitive strengths through a combination of internal and external growth strategies.

Internal Growth. Our strategy for internal growth includes: capitalizing on growth opportunities in the solar industry and the Asia-Pacific market; accelerating new product and technology development; enhancing our sales and marketing capabilities; and leveraging our installed base.

Capitalizing on Growth Opportunities in the Solar Industry. We have had recent success in increasing our sales to the solar industry. Our fiscal 2007 solar orders, which consist of backlog and shipped orders, totaled $21.4 million, compared to $8.0 million and $3.8 million in fiscal 2006 and 2005, respectively. We believe the increase in

orders from solar cell manufacturers is due to our focused product development and marketing efforts, as well as to growing overall demand from the solar industry. We believe that growth in the solar industry will be driven by rising energy demand, the increasing scarcity of traditional energy resources coupled with rising prices, the growing adoption of government incentives for solar energy due to increasing environmental awareness and concern about energy independence, the gradually decreasing cost of solar energy and the changing consumer preferences toward renewable energy sources.

Capitalizing on Growth Opportunities in the Asia-Pacific Market. With our extensive global knowledge and experience, particularly in Asia, we intend to further leverage our established sales channels in the Asia-Pacific market for current and future products. The Asia-Pacific region continues to be an important and expanding market for us, particularly because of the continuing migration of solar cell and semiconductor manufacturing to countries in that region. According to Solar Plaza, total solar cell production in China is expected to grow from 600 MWp in 2005 to 2,200 MWp in 2010 for a CAGR of 30%. For the nine months ended June 30, 2007, we have increased our sales into the Asia-Pacific market by 23% compared to the same period in 2006. This increase is primarily driven by solar equipment sales.

Accelerating New Product and Technology Development. We are focused on developing new products across our business in response to customer needs in various markets.

Small Batch Vertical Furnace. At $1.5 billion annually, the vertical furnace market is much larger than the horizontal furnace market that we have served historically. Our entry product into the vertical furnace market is a two-tube small batch vertical furnace for wafer sizes of up to 200mm, with each tube having a small flat zone capable of processing 25-50 wafers per run. We are targeting small batch niche applications in the vertical furnace market first, since the competition in the large batch vertical furnace market is intense and our competitors are much larger and have substantially greater financial resources, processing knowledge and advanced technology. We believe our large installed customer base increases the market to which we can sell our small batch vertical furnaces and other new products.

Precision Thickness Wafer Carrier. Wafer carriers are work holders into which silicon wafers or other materials are inserted for the purpose of holding them securely in place during the lapping and polishing processes. Many customers thin their wafer carriers to precise tolerances to meet their various applications. We internally developed and began selling precision thickness wafer carriers in 2007.

Enhancing our Sales and Marketing Capabilities. In order to increase sales and improve customer service globally, we intend to continue integrating our Bruce Technologies and Tempress sales and marketing teams and transitioning them from being product oriented to being regionally focused. We also intend to hire additional senior management to expand our existing solar sales and marketing efforts.

Leveraging our Installed Base. We intend to continue leveraging our relationships with our customers to maximize parts, system, service and retrofit revenue from the large installed base of Bruce Technologies and

Tempress brand horizontal diffusion furnaces. We intend to accomplish this by meeting these customers needs for replacement systems and additional capacity, including equipment and services in connection with any of our customers relocation to, or expansion efforts in, Asia.

External Growth. We intend to selectively seek strategic growth opportunities through acquisitions, joint ventures, geographic expansion and the development of additional manufacturing capacity.

Pursuing Strategic Acquisitions that Complement our Strong Platform. Over the last twelve years, we have developed an acquisition program and have completed the acquisition of four significant businesses.

Based on a disciplined acquisition strategy, we continue to evaluate potential technology, product and business acquisitions or joint ventures that are intended to increase our existing market share in the solar industry and expand the number of front-end semiconductor processes addressed by our products. In evaluating these opportunities, our objectives include: enhancing our earnings and cash flows, adding complementary product offerings, expanding our geographic footprint, improving our production efficiency and growing our customer base.

THE OFFERING

Common Stock Offered by the Company	2,300,000 shares (1)
Common Stock Outstanding after this Offering	8,850,923 shares (2)
Use of Proceeds	We intend to use the net proceeds from this offering for working capital and other general corporate purposes. See Use of Proceeds, beginning on page 20.
Risk Factors	You should carefully consider all of the information contained in this prospectus, and in particular, you should evaluate the specific risks set forth under Risk Factors, beginning on page 10.
NASDAQ Global Market Symbol	ASYS

---

(1) The number of shares assumes that the underwriters will exercise the over-allotment option granted to them by us.

(2) The number of shares assumes that the underwriters will exercise the over-allotment option granted to them by us. The number of shares outstanding as of November 2, 2007 does not include 417,553 shares of common stock reserved for issuance upon exercise of options outstanding under our stock options plans.

CORPORATE INFORMATION

Amtech was incorporated in Arizona in October 1981 under the name Quartz Engineering & Materials, Inc. We changed to our present name in 1987. We conduct operations through four wholly-owned subsidiaries: Tempress Systems, Inc., a Texas corporation with all of its operations in The Netherlands, also referred to herein as Tempress Systems or Tempress, acquired in 1994; P.R. Hoffman Machine Products, Inc., an Arizona corporation based in Carlisle, Pennsylvania, or PR Hoffman, acquired in July 1997; Bruce Technologies, Inc., a Massachusetts corporation based in Billerica, Massachusetts, or Bruce Technologies, acquired in July 2004; and R2D Ingenierie SAS, or R2D, French corporation located in Montpellier, France, acquired in October 2007.

Our principal executive offices are located at 131 South Clark Drive, Tempe, Arizona, 85281, and our telephone number is (480) 967-5146. Our website is located at www.amtechsytems.com. The information contained in, or that can be accessed through, our website is not part of this prospectus.

Tempress, Atmoscan, and PR Hoffman are our federally registered trademarks. Other trademarks used in this prospectus are the property of their respective owners.

SUMMARY CONSOLIDATED FINANCIAL DATA

We derived the consolidated operating data for the fiscal years ended September 30, 2004, 2005 and 2006 from our audited consolidated financial statements included elsewhere in this prospectus. The selected historical consolidated financial data for the nine months ended June 30, 2006 and June 30, 2007 were derived from our unaudited historical consolidated financial statements included elsewhere in this prospectus. We derived the consolidated balance sheet data as of June 30, 2007 from our unaudited consolidated financial statements included elsewhere in this prospectus. The summary pro forma financial information for the nine months ended June 30, 2007 was derived from our unaudited historical condensed consolidated financial statements and the unaudited historical financial statements of R2D included elsewhere in this prospectus.

The following selected financial data should be read in conjunction with the section of this prospectus entitled "Management's Discussion and Analysis of Financial Condition and Results of Operations," our consolidated financial statements (including the related notes thereto), the financial statements of R2D (including the related notes thereto) and the unaudited pro forma financial statements included elsewhere in this prospectus.

	Years Ended September 30,			Nine Months Ended June 30,		
	2004	2005	2006	2006	2007	2007 Pro forma[1]
		(Audited)			(Unaudited)	
	(In thousands, except percentages and per share amounts)					
Operating Data:						
Net revenues	$ 19,299	$ 27,899	$ 40,445	$ 29,157	$ 32,864	$ 36,331
Gross profit	$ 3,949	$ 7,668	$ 10,575	$ 7,917	$ 8,684	$ 9,919
Gross profit %	20.5%	27.5%	26.1%	27.2%	26.4%	27.3%
Operating income (loss)	$ (2,035)	$ (244)	$ 1,635	$ 1,106	$ 972	$ 1,186
Net income (loss)	$ (3,165)	$ (259)	$ 1,318	$ 822	$ 1,278	$ 1,257
Dividends on convertible preferred stock	$	$ (76)	$ (81)	$	$	$
Net income (loss) attributable to common	$ (3,165)	$ (335)	$ 1,237	$ 822	$ 1,278	$ 1,257
Earnings (loss) per share:						
Basic earnings (loss) per share	$ (1.17)	$ (0.12)	$ 0.40	$ 0.25	$ 0.25	$ 0.25
Diluted earnings (loss) per share	$ (1.17)	$ (0.12)	$ 0.38	$ 0.24	$ 0.25	$ 0.25

(1) The pro forma data gives effect to the acquisition of R2D as though it had occurred on October 1, 2006.

The following table contains a summary of our balance sheet at June 30, 2007.

	June 30,	
	2007	2007 Pro forma[1]
	(Unaudited) (Dollars in thousands)	
Balance Sheet Data:		
Cash and cash equivalents	$ 17,872	$ 43,295
Working capital	$ 29,721	$ 56,755
Current ratio	4.1:1	6.1:1
Total assets	$ 46,993	$ 80,819
Total current liabilities	$ 9,539	$ 11,169
Long-term obligations	$ 774	$ 854
Total stockholders equity	$ 36,680	$ 68,796

(1) The pro forma balance sheet data gives effect to the acquisition of R2D as though it had occurred on June 30, 2007 and the receipt of net proceeds of approximately $32.1 million from the sale of shares of common stock offered by us in this public offering at a price per share of $15.04 (and assumes that the underwriters will exercise the over-allotment option granted to them by us), after deducting the underwriting discount and estimated offering expenses payable by us. A $1.00 increase or decrease in the assumed public offering price of $15.04 per share would increase or decrease each of pro forma cash and cash equivalents, working capital, total assets and total stockholders equity by $2,162,000 assuming the underwriters will exercise the over-allotment option granted to them by us and after deducting the estimated underwriting discount.

RISK FACTORS

Before you invest in the securities offered pursuant to this prospectus, you should be aware that there are various related investment risks, including those described below. You should consider carefully these risk factors together with all of the other information included in this prospectus, and the exhibits to this prospectus.

If any of the following risks actually occur, our business, financial condition, results of operations or prospects could be materially and adversely affected. In such case, the trading price of our common stock could decline and you could lose part or all of your investment.

Risks Related to our Business and Industry.

If demand declines for horizontal diffusion furnaces and related equipment, or for solar industry products, our financial position and results of operations could be materially and adversely affected.

The revenue of our semiconductor equipment segment, which accounted for approximately 82% of our consolidated net revenue as of September 30, 2007, is comprised primarily of sales of horizontal diffusion furnaces and our automation products. Our automation products are useable only with horizontal diffusion furnaces. There is a trend in the semiconductor industry, related to the trend to produce smaller chips on larger wafers, towards the use in semiconductor manufacturing facilities of newer technology, such as vertical diffusion furnaces. Vertical diffusion furnaces are more efficient than the horizontal diffusion furnaces in certain manufacturing processes for smaller chips on larger wafers. As early as 1994, we had expected that demand for our horizontal diffusion furnaces would decline as a result of this trend. We believe this trend has not yet

adversely affected us to the extent originally expected. However, to the extent that the trend to use vertical diffusion furnaces over horizontal diffusion furnaces continues, our revenue may decline and our corresponding ability to generate income may be adversely affected.

A significant part of our growth strategy involves expanding our sales to the solar industry. The solar industry is subject to risks relating to industry shortages of polysilicon, (which we discuss further below), the continuation of government incentives, the availability of specialized capital equipment, global energy prices and rapidly changing technologies offering alternative energy sources. If the demand for solar industry products declines, the demand by the solar industry for our products would also decline and our financial position and results of operations would be harmed.

We may not be able to increase or sustain our recent growth rate, and we may not be able to manage our future growth effectively.

We may be unable to continue to expand our business or manage future growth. Our recent expansion has placed, and our planned expansion and any other future expansion will continue to place, a significant strain on our management, personnel, systems and resources. We have recently purchased additional equipment and real estate to significantly expand our manufacturing capacity and expect to hire additional employees to support an increase in manufacturing, research and development and sales and marketing efforts. To successfully manage our growth, we believe we must effectively:

- hire, train, integrate and manage additional field service engineers, sales and marketing personnel, and financial and information technology personnel;
- retain key management and augment our management team, particularly if we lose key members;
- continue to enhance our customer resource management and manufacturing management systems;
- implement and improve additional and existing administrative, financial and operations systems, procedures and controls;
- expand and upgrade our technological capabilities; and
- manage multiple relationships with our customers, suppliers and other third parties.

We may encounter difficulties in effectively managing the budgeting, forecasting and other process control issues presented by rapid growth. If we are unable to manage our growth effectively, we may not be able to take advantage of market opportunities, develop new solar cells and other products, satisfy customer requirements, execute our business plan or respond to competitive pressures.

The ongoing volatility of the semiconductor equipment industry may negatively impact our business and results of operations and our corresponding ability to efficiently budget our expenses.

The semiconductor equipment industry is highly cyclical. As such, demand for and the profitability of our products can change significantly from period to period as a result of numerous factors, including, but not limited to, changes in:

- global and regional economic conditions;
- changes in capacity utilization and production volume of manufacturers of semiconductors, silicon wafers, solar cells and MEMS;
- the shift of semiconductor production to Asia, where there often is increased price competition; and
- the profitability and capital resources of those manufacturers.

For these and other reasons, our results of operations for past periods may not necessarily be indicative of future operating results.

Since our business has historically been subject to cyclical industry conditions, we have experienced significant fluctuations in our quarterly new orders and net revenue, both within and across years. Demand for semiconductor and silicon wafer manufacturing equipment and related consumable products has also been volatile as a result of sudden changes in semiconductor supply and demand and other factors in both semiconductor devices and wafer fabrication processes. Our orders tend to be more volatile than our revenue, as any change in demand is reflected immediately in orders booked, which are net of cancellations, while revenue tends to be recognized over multiple quarters as a result of procurement and production lead times and the deferral of certain revenue under our revenue recognition policies. Customer delivery schedules on large system orders can also add to this volatility since we generally recognize revenue for new product sales on the date of customer acceptance or the date the contractual customer acceptance provisions lapse. As a result, the fiscal period in which we are able to recognize new products revenue is typically subject to the length of time that our customers require to evaluate the performance of our equipment after shipment and installation, which could cause our quarterly operating results to fluctuate.

The purchasing decisions of our customers are highly dependent on the economies of both their domestic markets and the worldwide semiconductor industry. The timing, length and severity of the up-and-down cycles in the semiconductor equipment industry are difficult to predict. The cyclical nature of our marketplace affects our ability to accurately budget our expense levels, which are based in part on our projections of future revenue.

When cyclical fluctuations result in lower than expected revenue levels, operating results may be adversely affected and cost reduction measures may be necessary in order for us to remain competitive and financially sound. During a down cycle, we must be able to make timely adjustments to our cost and expense structure to correspond to the prevailing market conditions. In addition, during periods of rapid growth, we must be able to increase manufacturing capacity and personnel to meet customer demand, which may require additional liquidity. We can provide no assurance that these objectives can be met in a timely manner in response to changes within the industry cycles. If we fail to respond to these cyclical changes, our business could be seriously harmed.

During the most recent down cycle, beginning in the first half of 2001, the semiconductor industry experienced excess production capacity that caused semiconductor manufacturers to decrease capital spending. We do not have long-term volume production contracts with our customers and we do not control the timing or volume of orders placed by our customers. Whether and to what extent our customers place orders for any specific products and the mix and quantities of products included in those orders are factors beyond our control. Insufficient orders would result in under-utilization of our manufacturing facilities and infrastructure and will negatively affect our financial position and results of operations.

The semiconductor equipment industry is competitive and we are relatively small in size and have fewer resources in comparison with our competitors.

Our industry includes large manufacturers with substantial resources to support customers worldwide. Our future performance depends, in part, upon our ability to continue to compete successfully worldwide. Some of our competitors are diversified companies having substantially greater financial resources and more extensive research, engineering, manufacturing, marketing and customer service and support capabilities than we can provide. We face

competition from companies whose strategy is to provide a broad array of products, some of which compete with the products and services that we offer. These competitors may bundle their products in a manner that may discourage customers from purchasing our products. In addition, we face competition from smaller emerging semiconductor equipment companies whose strategy is to provide a portion of the products and services that we offer at often a lower price than ours, using innovative technology to sell products into specialized markets. Loss of competitive position could impair our prices, customer orders, revenue, gross margin and market share, any of which would negatively affect our financial position and results of operations. Our failure to compete successfully with these other companies would seriously harm our business. There is a risk that larger, better-financed competitors will develop and market more advanced products than those that we currently offer, or that competitors with greater financial resources may decrease prices thereby putting us under financial pressure.

The occurrence of any of these events could have a negative impact on our revenue.

We are dependent on key personnel for our business and product development and sales, and any loss of our key personnel to competitors or other industries could dramatically impact our ability to continue operations.

Historically, our product development has been accomplished through cooperative efforts with key customers. Our relationship with some customers is substantially dependent on personal relations established by our President and Chief Executive Officer. Furthermore, our relationship with a major European customer that has been instrumental in the development of our small batch vertical furnace is substantially dependent upon our European General Manager. We are also dependent upon our Technical Director of R2D for the development of our automation technology. While there can be no assurance that such relationships will continue, such cooperation is expected to continue to be a significant element in our future development efforts thereby continuing our reliance on certain of our key personnel.

We are the beneficiary of life insurance policies on the life of our President and Chief Executive Officer, Mr. J. S. Whang, in the amount of $2,000,000, but there is no assurance that such amount will be sufficient to cover the cost of finding and hiring a suitable replacement for Mr. Whang. It may not be feasible for any successor to maintain the same business relationships that Mr. Whang has established. If we were to lose the services of Mr. Whang for any reason, it could have a material adverse affect on our business.

We also depend on the management efforts of our officers and other key personnel and on our ability to attract and retain key personnel. During times of strong economic growth, competition is intense for highly skilled employees. There can be no assurance that we will be successful in attracting and retaining such personnel or that we can avoid increased costs in order to do so. There can be no assurance that employees will not leave Amtech or compete against us. Our failure to attract additional qualified employees, or to retain the services of key personnel, could negatively impact our financial position and results of operations.

We may not be able to keep pace with the rapid change in the technology we use in our products.

Success in the semiconductor equipment industry depends, in part, on continual improvement of existing technologies and rapid innovation of new solutions. For example, the semiconductor industry continues to shrink the size of semiconductor devices. These and other evolving customer needs require us to respond with continued development programs.

Technical innovations are inherently complex and require long development cycles and appropriate professional staffing. Our future business success depends on our ability to develop and introduce new products, or new uses for existing products, that successfully address changing customer needs, win market acceptance of these new products or uses and manufacture any new products in a timely and cost-effective manner. If we do not develop and introduce new products, technologies or uses for existing products in a timely manner and continually find ways of reducing the cost to produce them in response to changing market conditions or customer requirements, our business could be seriously harmed.

Acquisitions can result in an increase in our operating costs, divert management's attention away from other operational matters and expose us to other risks associated with acquisitions.

We continually evaluate potential acquisitions and consider acquisitions an important part of our future growth strategy. In the past, we have made acquisitions of, or significant investments in, other businesses with synergistic products, services and technologies and plan to continue to do so in the future. Acquisitions, including our recent acquisition of R2D, involve numerous risks, including, but not limited to:

- difficulties and increased costs in connection with integration of geographically diverse personnel, operations, technologies and products of acquired companies;
- diversion of management's attention from other operational matters;

- the potential loss of key employees of acquired companies;
- lack of synergy, or inability to realize expected synergies, resulting from the acquisition;
- the risk that the issuance of our common stock, if any, in an acquisition or merger could be dilutive to our shareholders, if anticipated synergies are not realized; and
- acquired assets becoming impaired as a result of technological advancements or worse-than-expected performance of the acquired company.

Our financial position and results of operations may be materially harmed if we are unable to recoup our investment in research and development.

The rapid change in technology in our industry requires that we continue to make investments in research and development in order to enhance the performance and functionality of our products, to keep pace with competitive products and to satisfy customer demands for improved performance, features and functionality. There can be no assurance that revenue from future products or enhancements will be sufficient to recover the development costs associated with such products or enhancements, or that we will be able to secure the financial resources necessary to fund future development. Research and development costs are typically incurred before we confirm the technical feasibility and commercial viability of a product, and not all development activities result in commercially viable products. In addition, we cannot ensure that products or enhancements will receive market acceptance, or that we will be able to sell these products at prices that are favorable to us. Our business could be seriously harmed if we are unable to sell our products at favorable prices, or if our products are not accepted by the markets in which we operate.

If third parties violate our proprietary rights, in which we have made significant investments, such events could result in a loss of value of some of our intellectual property or costly litigation.

Our success is dependent in part on our technology and other proprietary rights. We own various United States and international patents and have additional pending patent applications relating to some of our products and technologies. The process of seeking patent protection is lengthy and expensive, and we cannot be certain that pending or future applications will actually result in issued patents, or that issued patents will be of sufficient scope or strength to provide meaningful protection or commercial advantage to us. Other companies and individuals, including our larger competitors, may develop technologies that are similar or superior to our technology or design around the patents we own or license. We also maintain trademarks on certain of our products and claim copyright protection for certain proprietary software and documentation. However, we can give no assurance that our trademarks and copyrights will be upheld or successfully deter infringement by third parties. Recently, the patent covering technology that we license and use in our manufacture of insert carriers has expired, which may have the effect of diminishing or eliminating any competitive advantage we may have with respect to this manufacturing process.

While patent, copyright and trademark protection for our intellectual property is important, we believe our future success in highly dynamic markets is most dependent upon the technical competence and creative skills of our personnel. We attempt to protect our trade secrets and other proprietary information through confidentiality agreements with our customers, suppliers, employees and consultants and through other security measures. We also maintain exclusive and non-exclusive licenses with third parties for the technology used in certain products. However,

these employees, consultants and third parties may breach these agreements, and we may not have adequate remedies for wrongdoing. In addition, the laws of certain territories in which we develop, manufacture or sell our products may not protect our intellectual property rights to the same extent as do the laws of the United States.

We may face intellectual property infringement claims that could be time-consuming and costly to defend and could result in our loss of significant rights and the assessment of treble damages.

From time to time, we have received communications from other parties asserting the existence of patent rights or other intellectual property rights that they believe cover certain of our products, processes, technologies or information. In such cases, we evaluate our position and consider the available alternatives, which may include seeking licenses to use the technology in question on commercially reasonable terms or defending our position. We cannot ensure that licenses can be obtained, or if obtained will be on acceptable terms, or that litigation or other administrative proceedings will not occur.

Some of these claims may lead to litigation. We cannot assure you that we will prevail in these actions, or that other actions alleging misappropriation or misuse by us of third-party trade secrets, infringement by us of third-party patents and trademarks or the validity of our patents, will not be asserted or prosecuted against us. Intellectual property litigation, regardless of outcome, is expensive and time-consuming, could divert management's attention from our business and have a material negative effect on our business, operating results or financial condition. If there is a successful claim of infringement against us, we may be required to pay substantial damages (including treble damages if we were to be found to have willfully infringed a third party's patent) to the party claiming infringement, develop non-infringing technology, stop selling or using technology that contains the allegedly infringing intellectual property or enter into royalty or license agreements that may not be available on acceptable or commercially practical terms, if at all. Our failure to develop non-infringing technologies or license the proprietary rights on a timely basis could harm our business. Parties making infringement claims on future issued patents may be able to obtain an injunction that would prevent us from selling or using our technology that contains the allegedly infringing intellectual property, which could harm our business.

Our reliance on sales to a few major customers and granting credit to those customers places us at financial risk.

We currently sell to a relatively small number of customers, and we expect our operating results will likely continue to depend on sales to a relatively small number of customers for the foreseeable future, as well as the ability of these customers to sell products that require our products in their manufacture. During the nine months ended June 30, 2007, we had two customers that individually represented 12% and 10% of revenue, respectively. One of the orders announced on October 17, 2007, represents approximately 33% of our August 14, 2007 guidance for fiscal 2007 revenue. Many of our customer relationships have been developed over a short period of time and certain of them are in their preliminary stages of development. The loss of sales to any of these customers would have a significant negative impact on our business. Our agreements with these customers may be cancelled if we fail to meet certain product specifications or materially breach the agreement or in the event of bankruptcy, and our customers may seek to renegotiate the terms of current agreements or renewals. We cannot be certain that these customers will generate significant revenue for us in the future or if these customer relationships will continue to develop. If our relationships with our other customers do not continue to develop, we may not be able to expand our customer base or maintain or increase our revenue.

As of June 30, 2007, accounts receivable from two customers each exceeded 10% of accounts receivable; one customer accounted for 14% and the other customer accounted for 12% of total accounts receivable. A concentration of our receivables from one or a small number of customers places us at risk. If any one or more of our major customers does not pay us it could adversely affect our financial position and results of operations. We attempt to manage this credit risk by performing credit checks, by requiring significant partial payments prior to shipment where appropriate and by actively monitoring collections. We also require letters of credit of certain customers depending on the size of the order, type of customer or its creditworthiness and its country of domicile.

If any of our customers cancels or fails to accept a large system order, our financial position and results of operations could be materially and adversely affected.

Our backlog includes orders for large systems, such as our diffusion furnaces, with system prices of up to and in excess of $1.0 million depending on the system configuration, options included and any special requirements of the customer. Because our orders are typically subject to cancellation or delay by the customer, our backlog at any particular point in time is not necessarily representative of actual sales for succeeding periods, nor is backlog any assurance that we will realize revenue or profit from completing these orders. Our financial position and results of operations could be materially and adversely affected should any large systems order be cancelled prior

to shipment, or not be accepted by the customer. We have experienced significant cancellations in the past, including $1.2 million in fiscal 1999, $3.5 million in 2001, and $1.2 million in 2002. We have not experienced any significant cancellations since 2002. Likewise, a significant change in the liquidity or financial position of any of our customers that purchase large systems could have a material impact on the collectibility of our accounts receivable and our future operating results. Our backlog does not provide any assurance that we will realize revenue or profit from those orders or indicate in which period net revenue will be recognized, if ever.

Our business might be adversely affected by a decline in our sales to foreign customers.

During fiscal 2006, 65% of our net revenue came from customers outside of North America. During the nine months ended June 30, 2007, 71% of our net revenue came from customers outside of North America as follows:

- Asia (including Korea, People□s Republic of China, Taiwan, Japan, Singapore, Malaysia, Australia and India) □ 48% (includes 17% to China and 19% to Taiwan); and
- Europe □ 23%.

Because of our significant dependence on revenue from international customers, our operating results could be negatively affected by a decline in the economies of any of the countries or regions in which we do business. Each region in the global semiconductor equipment market exhibits unique characteristics that can cause capital equipment investment patterns to vary significantly from period to period. Periodic local or international economic downturns, trade balance issues, political instability and fluctuations in interest and currency exchange rates could negatively affect our business and results of operations.

We recorded foreign currency transaction losses of $0.01 million during the first three quarters of fiscal 2007, losses of $0.1 million in 2006, gains of $0.1 million in 2005 and losses of $0.1 million during 2004. While our business has not been materially affected in the past by currency fluctuations, there is a risk that it may be materially adversely affected in the future. Such risk includes possible losses due to currency exchange rate fluctuations, possible future prohibitions against repatriation of earnings, or proceeds from disposition of investments, and from possible social and military instability in the case of India, South Korea, Taiwan and possibly elsewhere. Our wholly-owned subsidiary, Tempress Systems, has conducted its operations in The Netherlands since 1995 and during 2005 we established a subsidiary in Germany to conduct the European sales of our Bruce Technologies product line. In October 2007 we completed our acquisition of R2D, a French company. As a result, such operations are subject to the taxation policies, employment and labor laws, transportation regulations, import and export regulations and tariffs, possible foreign exchange restrictions, international monetary fluctuations, and other political, economic and legal policies of that nation, the European Economic Union and the other European nations in which it conducts business. Consequently, we might encounter unforeseen or unfamiliar difficulties in conducting our European operations. Changes in such laws and regulations may have a material adverse effect on our revenue and costs.

If our critical suppliers fail to deliver sufficient quantities of quality product in a timely and cost-effective manner, it could negatively affect our business.

We use a wide range of materials and services in the production of our products including custom electronic and mechanical components, and we use numerous suppliers of materials. We generally do not have guaranteed supply arrangements with our suppliers. Because of the variability and uniqueness of customer orders, we try to avoid maintaining an extensive inventory of materials for manufacturing. Key suppliers include two steel mills capable of producing the types of steel to the tolerances needed for our wafer carriers, an injection molder that molds plastic inserts into our steel carriers, an adhesive manufacturer that supplies the critical glue used in the production of the semiconductor polishing templates and a pad supplier that produces a unique material used to attach semiconductor wafers to the polishing template. We also rely on third parties for certain machined parts, steel frames and metal panels and other components used particularly in the assembly of semiconductor production equipment.

Although we make what we believe are reasonable efforts to ensure that parts are available from multiple suppliers, this is not always practical or even possible; accordingly, some key parts are being procured from a single supplier or a limited group of suppliers. During the semiconductor industry peak years, increases in

demand for capital equipment resulted in longer lead-times for many important system components. Future increases in demand could cause delays in meeting shipments to our customers. Because the selling price of some of our systems exceeds $1.0 million, the delay in the shipment of even a single system could cause significant variations in our quarterly revenue, operating results and the market value of our common stock.

There can be no assurance that our financial position and results of operations will not be materially and adversely affected if, in the future, we do not receive in a timely and cost-effective manner a sufficient quantity and quality of parts to meet our production requirements.

The solar power industry is currently experiencing an industry-wide shortage of polysilicon. This shortage poses several risks to our business, including possible constraints on revenue growth and possible decreases in our gross margins and profitability.

Many of our customers are solar cell manufacturers. Polysilicon is an essential raw material in the production of solar cells. There is currently an industry-wide shortage of polysilicon, which has resulted in significant price increases. We expect that the average spot price of polysilicon will continue to increase and we expect that polysilicon demand will continue to outstrip supply throughout 2007 and potentially for a longer period. The inability of our solar industry customers to obtain sufficient polysilicon at commercially reasonable prices, or at all, would adversely affect future customer demand for our products and could cause us to make fewer shipments and generate lower than anticipated revenue, thereby seriously harming our business, financial condition and results of operations.

We might require additional financing to expand our operations.

We believe that current cash balances, our existing line of credit, cash flows generated from our operations and additional available financing, together with the proceeds of this offering, will provide adequate working capital for at least the next twelve months. However, we may require additional financing for further implementation of our growth plans. There is no assurance that any additional financing will be available if and when required, or, even if available, that it would not materially dilute the ownership percentage of the then existing shareholders, result in increased expenses or result in covenants or special rights that would restrict our operations.

We are exposed to risks from legislation requiring companies to evaluate their internal control over financial reporting.

Section 404 of the Sarbanes-Oxley Act of 2002 will require our management to report on the effectiveness of our internal control over financial reporting beginning in fiscal 2008. Our independent registered public accounting firm will be required to attest to the effectiveness of our internal control over financial reporting beginning in fiscal 2008. We have an ongoing program to perform the system and process evaluation and testing necessary to comply with these requirements. We expect to incur increased expense and to devote additional management resources to Section 404 compliance. In the event our chief executive officer, chief financial officer or independent registered public accounting firm determine that our internal control over financial reporting is not effective as defined under Section 404, investor perceptions of our company may be adversely affected and could cause a decline in the market price of our stock.

Terrorist attacks and threats or actual war may negatively impact all aspects of our operations, revenue, costs and stock price.

The 2001 terrorist attacks in the United States, as well as events occurring in response or connection to them, including future terrorist attacks against United States targets, rumors or threats of war, actual conflicts involving the United States or its allies or military or trade disruptions impacting our domestic or foreign suppliers of parts, components and subassemblies, may impact our operations, including, among other things, by causing delays or losses in the delivery of supplies or finished goods and decreased sales of our products. More generally, any of these events could cause consumer confidence and spending to decrease or result in increased volatility in the United States and worldwide financial markets and economy. They could also result in economic recession in the United States or abroad. Any of these occurrences could have a significant adverse impact on our financial position and results of operations.

We face the risk of product liability claims or other litigation, which could be expensive and divert management from running our business.

The manufacture and sale of our products, which in operation involve toxic materials, involve the risk of product liability claims. In addition, a failure of one of our products at a customer site could interrupt the business operations of our customer. Our existing insurance coverage limits may not be adequate to protect us from all liabilities that we might incur in connection with the manufacture and sale of our products if a successful product liability claim or series of product liability claims were brought against us. We may also be involved in other legal proceedings or claims and experience threats of legal action from time to time in the ordinary course of our business.

Where appropriate, we intend to vigorously defend all claims. However, any actual or threatened claims, even if not meritorious or material, could result in the expenditure of significant financial and managerial resources. The continued defense of these claims and other types of lawsuits could divert management s attention away from running our business. Negative developments in lawsuits could cause our stock price to decline as well. In addition, required amounts to be paid in settlement of any claims, and the legal fees and other costs associated with such settlement, cannot be estimated and could, individually or in the aggregate, materially harm our financial condition.

We are subject to environmental regulations, and our inability or failure to comply with these regulations could result in significant costs or the suspension of our ability to operate segments of our business..

We are subject to environmental regulations in connection with our business operations, including regulations related to manufacturing and our customers use of our products. From time to time, we receive notices regarding these regulations. It is our policy to respond promptly to these notices and to take any necessary corrective action. Our failure or inability to comply with existing or future environmental regulations could result in significant remediation liabilities, the imposition of fines and/or the suspension or termination of development, manufacturing or use of certain of our products, each of which could damage our financial position and results of operations.

Risks Related To The Securities Offered Pursuant to this Prospectus.

Our common stock is thinly traded and you may not be able to sell the securities at all or when you want to do so.

Our common stock currently is quoted on the NASDAQ Global Market and currently is thinly traded. During the year ended September 30, 2007, the daily trading volume for our common stock was as low as zero and as high as 2,208,301 as reported by NASDAQ. Our average daily trading volume was 178,896 shares for the quarter ended September 30, 2007 as reported by NASDAQ. Because of the limited public market for our common stock, you may be unable to sell our common stock when you want to do so if the trading market for our common stock continues to be limited.

Our current capital structure could delay, defer or prevent a change of control.

We are authorized to issue up to 100,000,000 shares of common stock and up to 100,000,000 shares of preferred stock. As of September 30, 2007, there were 6,517,923 shares of common stock outstanding. Authorized but unissued common stock may be issued for such consideration as the board of directors determines to be adequate. The board of directors may issue preferred stock with such rights, preferences, privileges and restrictions as they determine, without shareholder vote. Although we do not currently intend to issue any additional shares of our preferred stock, there can be no assurance that we will not do so in the future. Shareholders may or may not be given the opportunity to vote thereon, depending upon the nature and size of any such transactions, applicable law, the rules and policies of the national securities exchange on which the common stock or preferred stock, as the case may be, is then trading, if any, and the judgment of the board of directors. Shareholders have no preemptive rights to subscribe for newly issued shares of our capital stock.

On May 17, 1999, we declared a dividend distribution of one preferred share purchase right for each outstanding share of common stock. The dividend was payable on June 9, 1999 to shareholders of record as of the close of business on that date. Each right entitles the registered holder to purchase one one-hundredth of a share of Series A Participating Preferred Stock, subject to adjustment, at a price of $8.50 per one one-hundredth of a share of Preferred Stock, subject to adjustment. The rights issuance was adopted as protection against a takeover by a third party.

Having the outstanding rights, and a substantial number of authorized and unreserved shares of common stock, preferred stock and severance arrangements with key employees could have the effect of making it more difficult for a third party to acquire a majority of our outstanding voting stock. Management could use the additional shares to resist a takeover effort even if the terms of the takeover offer are favored by a majority of the independent shareholders. This could delay, defer or prevent a change in control.

Shares eligible for future sale may cause the market price of our common stock to drop significantly, even if our business is doing well.

The market price of our common stock could decline as a result of sales of a large number of shares of our common stock in the market after this offering or the perception that these sales could occur. These sales, or the possibility that these sales may occur, also might make it more difficult for us to sell equity securities in the future at a time and at a price that we deem appropriate.

After the consummation of this offering, there will be 8,550,923 shares of our common stock (8,850,923 shares if the underwriters exercise their over-allotment option in full) outstanding. The 2,000,000 shares of common stock sold in this offering (2,300,000 shares if the underwriters exercise their over-allotment option in full) will be freely tradable without restriction or further registration under the Securities Act of 1933, as amended, by persons other than our affiliates within the meaning of Rule 144 under the Securities Act.

If our securities become ineligible for trading on NASDAQ, they might be subject to Rule 15g-9 of the Securities Exchange Act of 1934, which imposes additional sales practice requirements on broker-dealers who sell such securities to persons other than established customers and accredited investors.

While our common stock is now included on the NASDAQ Global Market, continued listing on NASDAQ will depend on our ability to meet certain eligibility requirements established from time to time by the NASDAQ Global Market. Loss of NASDAQ eligibility could result from material operating losses, or if the market price of our common stock falls below $1.00 per share. For transactions covered by the rule, the broker-dealer must make a special suitability determination for the purchaser and receive the purchaser's written consent to the transaction prior to the sale. The rule may adversely affect the ability of broker-dealers to sell our securities, and consequently may limit the public market for, and the trading price of, our common stock.

Our stock price is volatile and you might not be able to resell your securities at or above the price you have paid.

You might not be able to sell the shares of our common stock at or above the price you have paid. The market price of our common stock might fluctuate significantly in response to many factors, some of which are beyond our control, including the following:

- actual or anticipated fluctuations in our annual and quarterly results of operations;
- changes in securities analysts' expectations;
- variations in our operating results, which could cause us to fail to meet analysts' or investors' expectations;
- announcements by our competitors or us of significant technical innovations, contracts, acquisitions, strategic partnerships, joint ventures or capital commitments;

- conditions and trends in the semiconductor equipment industry;
- general market, economic, industry and political conditions;
- changes in market values of comparable companies;
- additions or departures of key personnel;
- stock market price and volume fluctuations attributable to inconsistent trading volume levels; and
- future sales of equity or debt securities, including sales which dilute existing investors.

In addition, the stock market has experienced extreme volatility that often has been unrelated to the performance of its listed companies. Moreover, only a limited number of our shares are traded each day, which could increase the volatility of the price of our stock. These market fluctuations might cause our stock price to fall regardless of our performance. In the past, companies that have experienced volatility in the market price of their stock have been the objects of securities class action litigation. If we were involved in securities class action litigation, it could result in substantial costs and a diversion of our attention and resources and have a material adverse effect on our business.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus contains certain forward-looking statements that involve a number of risks and uncertainties.

Certain information in this prospectus contains statements that are forward-looking in nature. All statements included in this prospectus, or made by the management of Amtech Systems, Inc. and its subsidiaries, or Amtech, other than statements of historical fact, are hereby identified as "forward-looking statements" (as such term is defined in Section 27A of the Securities Act of 1933, as amended, or the Securities Act, and Section 21E of the Securities Exchange Act of 1934, as amended). Examples of forward-looking statements include statements regarding our belief that the solar industry will continue to expand, our future financial results, operating results, business strategies, projected costs, products under development such as our small batch vertical furnace, competitive positions and plans and objectives of Amtech and our management for future operations. In some cases, forward-looking statements can be identified by terminology such as "may," "will," "should," "would," "expec "plans," "anticipates," "intends," "believes," "estimates," "predicts," "potential," "continue," or the negative of thes other comparable terminology. Any expectations based on these forward-looking statements are subject to risks and uncertainties and other important factors, including the "Risk Factors" discussed herein. These and many other factors could affect our future operating results and financial condition and could cause actual results to differ materially from expectations based on forward-looking statements made in this document or elsewhere by us or on our behalf. All references to "we," "our," "us," or "Amtech" refer to Amtech Systems, Inc. and its subsidiaries.

We undertake no obligation to publicly update or revise any forward-looking statements, whether as a result of new information, future events or otherwise, after the date of this prospectus to conform them to actual results. All of the forward-looking statements are qualified in their entirety by reference to the factors discussed under the caption "Risk Factors."

We caution the reader that these risk factors may not be exhaustive. We operate in a continually changing business environment and new risk factors emerge from time to time. Management cannot predict such new risk factors, nor can it assess the impact, if any, of such new risk factors on our businesses or the extent to which any factor or combination of factors may cause actual results to differ materially from those projected in any forward-looking statements. In light of these risks, uncertainties and assumptions, the forward-looking events discussed in this prospectus might not occur.

For these statements, we claim the protection of the safe harbor for forward-looking statements contained in Section 21E of the Securities Act.

You should carefully read this prospectus in its entirety. It contains information that you should consider when making your investment decision.

USE OF PROCEEDS

We estimate that we will receive net proceeds from our offering of our common stock, after deducting the estimated underwriting discount and commissions and other estimated offering expenses payable by us, of approximately $27,875,000, or approximately $32,116,000 if the underwriters exercise their over-allotment option in full, in each case assuming the shares are offered at $15.04 per share. A $1.00 increase or decrease in the assumed public offering price of $15.04 per share would increase or decrease each of pro forma cash and cash equivalents, working capital, total assets and total stockholders equity by $2,162,000 assuming the underwriters will exercise the over-allotment option granted to them by us and after deducting the estimated underwriting discount. We intend to use the net proceeds from this offering for working capital and other general corporate purposes. Pending application of these proceeds, we intend to invest the net proceeds of this offering in short-term, interest bearing investment grade securities.

DIVIDEND POLICY

We have never paid cash dividends on our common stock. Our present policy is to apply cash to investment in product development, acquisition or expansion; consequently, we do not expect to pay dividends on our common stock in the foreseeable future.

SELECTED CONSOLIDATED FINANCIAL DATA

We derived the consolidated operating and balance sheet data for the fiscal years ended September 30, 2004, 2005 and 2006 from our audited consolidated financial statements included elsewhere in this prospectus. We derived the consolidated operating and balance sheet data for the fiscal years ended September 30, 2002 and 2003 from our audited consolidated financial statements not included in this prospectus. The selected historical consolidated financial and balance sheet data for the nine months ended June 30, 2006 and June 30, 2007 were derived from our unaudited historical consolidated financial statements included elsewhere in this prospectus. The selected pro forma financial information for the nine months ended June 30, 2007 is derived from our unaudited historical condensed consolidated financial statements and the unaudited historical financial statements of R2D included elsewhere in this prospectus.

The following selected financial data should be read in conjunction with the section of this prospectus entitled Management s Discussion and Analysis of Financial Condition and Results of Operations, our consolidated financial statements (including the related notes thereto) and the unaudited historical financial statements of R2D included elsewhere in this prospectus.

	Years Ended September 30,					Nine Months En	
	2002	2003	2004	2005	2006	2006	200
			(Audited)				(Unaudi
	(In thousands, except percentages and per share amounts)						
Operating Data:							
Net revenues	$20,533	$19,434	$ 19,299	$ 27,899	$40,445	$ 29,157	$ 32,8
Gross profit	$ 4,997	$ 4,835	$ 3,949	$ 7,668	$10,575	$ 7,917	$ 8,68
Gross profit %	24.3%	24.9%	20.5%	27.5%	26.1%	27.2%	26
Operating income (loss)	$ 77	$ (245)	$ (2,035)	$ (244)	$ 1,635	$ 1,106	$ 97
Net income (loss)	$ 118	$ (100)	$ (3,165)	$ (259)	$ 1,318	$ 822	$ 1,27
Dividends on convertible preferred stock	$	$	$	$ (76)	$ (81)	$	$

Net income (loss) attributable to common	$ 118	$ (100)	$(3,165)	$ (335)	$ 1,237	$ 822	$ 1,27
Earnings (loss) per share:							
Basic earnings (loss) per share	$ 0.04	$ (0.04)	$ (1.17)	$ (0.12)	$ 0.40	$ 0.25	$ 0.2
Diluted earnings (loss) per share	$ 0.04	$ (0.04)	$ (1.17)	$ (0.12)	$ 0.38	$ 0.24	$ 0.2
Balance Sheet Data:							
Cash and cash equivalents	$ 8,046	$ 7,453	$ 1,674	$ 3,309	$ 6,433	$ 3,574	$17,87
Working capital	$12,166	$12,727	$ 7,735	$ 9,968	$11,883	$11,400	$29,72
Current ratio	5.5:1	4.9:1	2.7:1	3.7:1	2.6:1	2.6:1	4.1
Total assets	$17,393	$18,399	$16,660	$17,701	$23,563	$22,647	$46,99
Total current liabilities	$ 2,722	$ 3,259	$ 4,531	$ 3,752	$ 7,337	$ 7,091	$ 9,53
Long-term obligations	$ 459	$ 640	$ 474	$ 741	$ 617	$ 650	$ 77
Convertible preferred stock	$	$	$	$ 1,935	$	$	$
Total stockholders equity	$14,212	$14,499	$11,655	$13,208	$15,609	$14,906	$36,68

(1) The pro forma operating and balance sheet data gives effect to the acquisition of R2D as though it had occurred on October 1, 2006. The balance sheet data also gives effect to the receipt of net proceeds of approximately $32.1 million from the sale of shares of common stock offered by us in this public offering (and assumes that the underwriters will exercise the over-allotment option granted to them by us), after deducting the underwriting discount and estimated offering expenses payable by us. A $1.00 increase or decrease in the assumed public offering price of $15.04 per share would increase or decrease each of pro forma cash and cash equivalents, working capital, total assets and total stockholders equity by $2,162,000 assuming the underwriters will exercise the over-allotment option granted to them by us and after deducting the estimated underwriting discount.

QUARTERLY CONSOLIDATED FINANCIAL DATA

The following table presents unaudited quarterly financial information for each of the eleven quarters ended June 30, 2007. In the opinion of management, this information contains all adjustments, consisting only of normal recurring adjustments, necessary for a fair presentation thereof. The operating results are not necessarily indicative of results for any future periods. Quarter-to-quarter comparisons should not be relied upon as indicators of future performance. Our operating results are subject to quarterly fluctuations as a result of a number of factors. See Risk Factors Risk Related to our Business and Industry.

	For the Quarter Ended								
	2005				2006				
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
	(dollars in thousands, except per share amounts)								
Operating Data:	(unaudited)								
Net revenues	$7,172	$8,915	$5,507	$ 6,305	$7,914	$10,892	$ 10,351	$11,288	$9,451
Gross profit	$2,134	$2,507	$1,732	$ 1,295	$2,537	$ 2,737	$2,643	$ 2,658	$2,392
Gross profit %	29.8%	28.1%	31.5%	20.5%	32.1%	25.1%	25.5%	23.5%	25.3%
Operating income (loss)	$ 97	$ 459	$ 78	$ (878)	$ 478	$ 427	$ 201	$ 529	$ 55
Net income (loss)	$ 68	$ 503	$ 132	$ (962)	$ 471	$ 182	$ 168	$ 497	$ 6
Dividends on									

convertible preferred stock	$	$	$ 33	$ 43	$ 44	$ 37	$	$
Net income (loss) attributable to common	$ 68	$ 503	$ 99	$ (1,005)	$ 427	$ 182	$ 168	$ 497	$ 6
Earnings (loss) per share:									
Basic earnings (loss) per share	$ 0.03	$ 0.19	$ 0.04	$ (0.37)	$ 0.16	$ 0.05	$ 0.05	$ 0.14	$ 0.00
Diluted earnings (loss) per share	$ 0.02	$ 0.18	$ 0.04	$ (0.37)	$ 0.14	$ 0.05	$ 0.05	$ 0.14	$ 0.00

MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following discussion of our financial condition and results of operations should be read in conjunction with our Consolidated Financial Statements and the related notes included elsewhere in this prospectus. This discussion contains forward-looking statements, which involve risk and uncertainties. Our actual results could differ materially from those anticipated in the forward-looking statements as a result of certain factors including, but not limited to, those discussed in "Risk Factors" and elsewhere in this prospectus.

Introduction

Management's Discussion and Analysis, or MD&A, is intended to facilitate an understanding of our business and results of operations. MD&A consists of the following sections:

- Overview: a summary of our business.
- Results of Operations: a discussion of operating results.
- Liquidity and Capital Resources: an analysis of cash flows, sources and uses of cash and financial position.
- Off - Balance Sheet Arrangements.
- Contractual Obligations and Commercial Commitments.
- Critical Accounting Policies: a discussion of critical accounting policies that require the exercise of judgments and estimates.
- Impact of Recently Issued Accounting Pronouncements: a discussion of how we are affected by recent pronouncements.

Overview

We operate in two segments: the semiconductor and solar equipment segment and the polishing supplies segment. Our semiconductor and solar equipment segment is a leading supplier of thermal processing systems, including related automation, parts and services, to the semiconductor, photovoltaic solar, silicon wafer and MEMS industries.

Our polishing supplies and equipment segment is a leading supplier of wafer carriers to manufacturers of silicon wafers. The polishing segment also manufacturers polishing templates, steel carriers and double-sided polishing and lapping machines to fabricators of optics, quartz, ceramics and metal parts, and to manufacturers

of medical equipment components.

Our customers are primarily manufacturers of integrated circuits and solar cells. The semiconductor and solar cell industries are cyclical and historically have experienced significant fluctuations. Our revenue is impacted by these broad industry trends.

Our contracts typically include holdbacks of 10-20% of revenue that are recognized at the time of customer acceptance. Due to the nature of these contracts and to the nature of the capital equipment markets overall, our revenues, gross margins, and operating results have historically fluctuated on a quarterly basis.

As our automation products are often sold in conjunction with new diffusion furnaces to increase efficiency and reduce costs, we adopted a plan to consolidate the manufacturing of our automation product line into facilities already used to manufacture diffusion furnaces in June 2006. This consolidation was completed during January 2007 and, as a result, we recorded approximately $0.2 million of restructuring charges in fiscal 2006.

In July 2004, we completed the acquisition of the Bruce Technologies horizontal diffusion furnace product line from Kokusai Semiconductor Equipment Corporation, which we believe makes us a leading manufacturer of horizontal diffusion furnaces.

RESULTS OF OPERATIONS

Three and Nine Month Periods Ended June 30, 2007 compared to Three and Nine Month Periods Ended June 30, 2006

The following table sets forth certain interim operational data as a percentage of net revenue for the interim periods indicated:

	Three Months Ended		Nine Months Ended	
	June 30, 2007	June 30, 2006	June 30, 2007	June 30, 2006
Net revenue	100%	100%	100%	100%
Cost of goods sold	73%	74%	74%	73%
Gross margin	27%	26%	26%	27%
Operating expenses:				
Selling, general and administrative	21%	22%	22%	22%
Restructuring charges	0%	1%	0%	0%
Research and development	1%	1%	1%	1%
Total operating expenses	22%	24%	23%	23%
Income from operations	5%	2%	3%	4%
Interest income (expense), net	1%	0%	1%	0%
Income before income taxes	6%	2%	4%	4%
Income tax expense (benefit)	(2)%	0%	0%	1%
Net income	8%	2%	4%	3%

Net Revenue

Net revenue consists of equipment revenue recognized upon shipment or installation of products using proven technology and upon acceptance of products using new technology. In addition, spare parts sales are recognized upon shipment. Service revenue is recognized upon completion of the service activity or ratably over the term of the service contract. The majority of our revenue is generated from large furnace systems sales which, depending on the timing of shipment and installation, can have a significant impact on our revenue and earnings in any given period. See Critical Accounting Policies Revenue Recognition.

Net Revenue	Three Months Ended June 30, 2007	June 30, 2006	Inc. (Dec)	%	Nine Months Ended June 30, 2007	June 30, 2006	Inc. (Dec)	%
	(dollars in thousands)				(dollars in thousands)			
Semiconductor and Solar Equipment Segment	$10,886	$ 8,648	$2,238	26%	$26,641	$23,927	$2,714	11%
Polishing Supplies Segment	1,988	1,703	285	17%	6,223	5,230	993	19%
Total	$12,874	$10,351	$2,523	24%	$32,864	$29,157	$3,707	13%

Net revenue for the quarter ended June 30, 2007 increased by $2.5 million, or 24%, compared to the quarter ended June 30, 2006. Net revenue from sales to our solar customers increased $3.1 million due to the continuing increase in demand for our solar products. This increase was partially offset by a decrease in semiconductor equipment revenue. In the third quarter of fiscal 2006 we recognized $0.8 million from the acceptance of several furnaces from a $5.2 million multi-furnace order which was shipped in the second quarter of fiscal 2006. There was no corresponding acceptance of a similar magnitude in the third quarter of fiscal 2007. Net revenue for other semiconductor equipment in the third quarter of fiscal 2007 remained comparable to the same period in 2006 after excluding the multi-furnace order. The 17% increase in revenue from our polishing supplies segment was primarily the result of increased volume of shipments of our polishing machines.

Net revenue for the nine months ended June 30, 2007 increased by $3.7 million, or 13%, compared to the nine months ended June 30, 2006. The 13% increase was driven primarily by $8.1 million of solar industry revenue, a $5.8 million increase over the same period in fiscal 2006, a $1.9 million increase in other semiconductor revenue,

excluding the $5.0 million of 2006 net revenue from the multi-system order discussed above and a $1.0 million, or 19%, increase for our polishing supplies segment resulting from increased demand for our polishing machines and polishing templates.

The following table reflects new orders, shipments and net revenues for the third quarter during the current and prior fiscal year, and the backlog as of the end of those periods, on a consolidated basis, as well as for each of our two business segments.

	Third Quarter			Nine Months		
	Semiconductor and Solar Equipment Segment (1)	Polishing Supplies Segment	Total Company	Semiconductor and Solar Equipment Segment (1)	Polishing Supplies Segment	Total Company
	(dollars in thousands)			(dollars in thousands)		
2007:						
New orders (2)	$15,020	$2,314	$17,334	$33,477	$6,440	$39,917
Shipments	11,638	1,988	13,626	27,510	6,223	33,733
Net revenues	10,886	1,988	12,874	26,641	6,223	32,864
Backlog 6/30/2007	19,450	1,203	20,653	19,450	1,203	20,653
Book-to-bill ratio	**1.3:1**	**1.2:1**	**1.3:1**	**1.2:1**	**1.0:1**	**1.2:1**
2006:						
New orders (2)	$ 8,708	$1,798	$10,506	$23,084	$5,163	$28,247
Shipments	9,204	1,695	10,899	25,467	5,230	30,697
Net revenues	8,648	1,703	10,351	23,928	5,230	29,158
Backlog 6/30/2006	12,556	921	13,477	12,556	921	13,477
Book-to-bill ratio	**0.9:1**	**1.1:1**	**1.0:1**	**0.9:1**	**1.0:1**	**0.9:1**

(1)

The backlog as of June 30, 2007 and 2006, respectively, includes $0.9 million and $1.0 million of deferred revenue for which there is an equal amount of deferred costs, i.e. with no gross profit to be realized.

(2) Orders are net of cancellations and include the change in the U.S. dollar value of orders recorded in Euros by our semiconductor and solar equipment segment.

Backlog

Our order backlog as of June 30, 2007 and 2006 was $20.7 million and $13.5 million, respectively, a 53% increase. Our backlog as of June 30, 2007 includes approximately $11.5 million of orders from our solar industry customers compared to $3.1 million in orders from solar industry customers as of June 30, 2006. The orders included in our backlog are generally credit approved customer purchase orders expected to ship within the next six to twelve months. Because our orders are typically subject to cancellation or delay by the customer, our backlog at any particular point in time is not necessarily representative of actual sales for succeeding periods, nor is backlog any assurance that we will realize revenue or profit from completing these orders. We believe the orders included in backlog are probable of being filled and not cancelled. Our backlog also includes revenue deferred pursuant to our revenue recognition policy, derived from orders that have already been shipped, but which have not met the criteria for revenue recognition.

Gross Profit and Gross Margin

Gross profit is the difference between net revenue and the cost of goods sold. Cost of goods sold consists of purchased material, labor and overhead to manufacture equipment and spare parts and the cost of service, including factory and field support to customers for warranty, installation, service contracts and paid service calls. In addition, the cost of outsourcing the assembly or manufacturing of certain systems and subsystems to third parties and subcontracted field service is included in cost of goods sold. The timing of recognizing the revenue components of an order may have a particularly significant effect on gross margin when the component attributed to equipment is

recognized in one period and the remaining component attributed to installation, generally a holdback of 10% to 20% of the order, is recognized in a later period because the latter revenue has a significantly higher gross margin percentage.

	Three Months Ended				Nine Months Ended			
Gross profit	**June 30, 2007**	**June 30, 2006**	**Inc. (Dec)**	**%**	**June 30, 2007**	**June 30, 2006**	**Inc. (Dec)**	**%**
	(dollars in thousands)				**(dollars in thousands)**			
Semiconductor and Solar Equipment Segment	$2,758	$2,103	$655	31%	$6,533	$6,227	$306	5%
Polishing Supplies Segment	666	540	126	23%	2,151	1,690	461	27%
Total	$3,424	$2,643	$781	30%	$8,684	$7,917	$767	10%
Gross Margin	27%	26%			26%	27%		

Gross profit for the quarter ended June 30, 2007 increased 30%, to $3.4 million from $2.6 million in the quarter ended June 30, 2006, with the gross margin increasing one percentage point to 27%, from 26%. Gross profit in the semiconductor and solar equipment segment increased despite a $0.9 million unfavorable change in deferred profit in the quarter, relative to the change in deferred profit in the third quarter of fiscal 2006. In the third quarter of fiscal 2007, the amount of profit deferred to future periods increased $0.7 million compared to a $0.2 million decrease in the third quarter of 2006. Contributing to the higher margins in this segment were improved product mix and better labor efficiencies and plant utilization achieved through higher manufacturing volumes. Shipments in the third quarter of fiscal 2006 included certain products which had lower margins due to higher engineering and material costs. The polishing supplies segment also achieved higher labor efficiencies from increased sales volumes, resulting in a gross margin improvement of two percentage points.

Gross profit for the nine months ended June 30, 2007 increased 10%, to $8.7 million from $7.9 million, with a slight decrease in the gross margin percentage compared to the nine months ended June 30, 2006. The

improvements in gross margin in the third quarter of fiscal 2007 are offset by a slight decline in gross margin in the first half of 2007, when compared to the same period in 2006. In the first half of fiscal 2006, we shipped a significantly higher number of semiconductor automation systems and etching machines, which typically carry a higher gross margin than the products we shipped in the first half of 2007.

The continued growth of our sales to the solar industry created capacity constraints at our European operations. Consequently, we purchased a new operating plant in March 2007, which we believe will significantly increase our capacity and incrementally improve the operating efficiencies of our semiconductor and solar cell equipment manufacturing segment in fiscal 2008.

Selling, General and Administrative

Selling, general and administrative expenses consist primarily of the cost of employees, consultants and contractors, facility costs, sales commissions, promotional marketing expenses, legal, investor relations and accounting expenses.

	Three Months Ended				Nine Months Ended			
Selling, general and administrative	**June 30, 2007**	**June 30, 2006**	**Inc. (Dec)**	**%**	**June 30, 2007**	**June 30, 2006**	**Inc. (Dec)**	**%**
	(dollars in thousands)				**(dollars in thousands)**			
Semiconductor and Solar Equipment Segment	$2,335	$1,925	$410	21%	$6,231	$5,364	$ 867	16%
Polishing Supplies Segment	365	313	52	17%	1,105	935	170	18%
Total	$2,700	$2,238	$462	21%	$7,336	$6,299	$1,037	16%
Percent of net revenue	21%	22%			22%	22%		

Selling, general and administrative expenses for the quarter ended June 30, 2007 increased $0.5 million, or 21%, to $2.7 million from $2.2 million for the quarter ended June 30, 2006. The increase was primarily due to a $0.2 million increase in personnel and consulting costs, and a $0.1 million increase in stock option expense. Additionally, commissions increased $0.2 million for the three months ended June 30, 2007 when compared to the same period in fiscal 2006 due to higher shipments to regions where third-party sales representatives are utilized. For the three and nine months ended June 30, 2007, other personnel and consulting costs increased compared to the same periods ended June 30, 2006 as a result of the need to (i) improve internal financial and operational reporting, (ii) identify potential improvements in operational efficiencies, (iii) assist in developing and executing our growth strategies and (iv) manage the increasing compliance obligations of a growing multi-national public company.

Restructuring Charges

In June 2006, our management adopted a plan to consolidate the manufacturing of our automation product line into facilities already used to manufacture diffusion furnaces. Our automation products are often sold in conjunction with the sale of new diffusion furnaces. As a result of this decision, we incurred a restructuring charge of $0.1 million. We incurred no comparable costs in fiscal 2007.

Research and Development

Research and development expenses consist of the cost of employees, consultants and contractors who design, engineer and develop new products and processes; materials and supplies used in those activities; and product prototyping.

	Three Months Ended			Nine Months Ended		
	June 30,	**June 30,**	**Inc.**	**June 30,**	**June 30,**	**Inc.**

Research and Development	2007	2006	(Dec)	%	2007	2006	(Dec)	%
	(dollars in thousands)				(dollars in thousands)			
Semiconductor and Solar Equipment Segment	$117	$65	$52	80%	$376	$372	$ 4	1%
Polishing Supplies Segment				0%				0%
Total	$117	$65	$52	80%	$376	$372	$ 4	1%

Research and development costs for the three and nine months ended June 30, 2007 are comparable to the three and nine month periods ended June 30, 2006. Costs reflect credits for $0.1 million of government grants for the three and nine month periods ended June 30, 2007 and 2006.

Interest and other income (expense), net

Interest and other income (expense), net, primarily consists of interest income, interest expense and gains and losses on foreign currency transactions.

	Three Months Ended			Nine Months Ended		
Interest and other income (expense), net	June 30, 2007	June 30, 2006	Inc. (Dec)	June 30, 2007	June 30, 2006	Inc. (Dec)
	(dollars in thousands)			(dollars in thousands)		
Interest and other income (expense), net	$155	$ (4)	$159	$324	$(9)	$333
Foreign currency gains (losses)	15	(25)	40	(11)	5	(16)
Total	$170	$(29)	$199	$313	$(4)	$317

Interest income represents earnings on invested funds. Interest expense primarily consists of interest incurred on our overdraft facility, revolving line of credit, equipment financing, a mortgage on our land and buildings in The Netherlands, and amortization of debt issuance costs. Due to an increase in cash and cash equivalents raised in our public offering of common stock during the second quarter of fiscal 2007, net interest income increased by $0.2 million and $0.3 million during the three and nine months ended June 30, 2007, respectively, from the comparable periods in 2006.

Income Taxes

During the three months ended June 30, 2007 we recorded an income tax benefit of $0.2 million while the provision for the same period ended June 30, 2006 was effectively zero, as a result of recording reductions in the valuation allowance on deferred tax assets of $0.5 million and $0.1 million, respectively. The reductions in the valuation allowance on deferred tax assets result from a continued improvement in both our earnings history and our prospects for the future, which caused us to reduce our estimate of the amount of deferred assets that more likely than not will be unrealizable. During the nine months ended June 30, 2007 and 2006, we recorded income tax provisions of effectively zero and $0.3 million, respectively, as a result of recording reductions in the valuation allowance on deferred tax assets of $0.5 million and $0.2 million, respectively. In addition, during the nine months ended June 30, 2007, we recorded an increase of $0.5 million in deferred tax assets, excluding the effects of the change in the valuation allowance for items that meet the more likely than not criteria for recognition under SFAS No. 109. (See Note 2 to our Condensed Consolidated Financial Statements). For the nine months ended June 30, 2007 and 2006, the effective tax rates excluding the benefit from the reductions in the valuation allowance were 43.3% and 47%, respectively, as permanent differences have become smaller in relation to income before taxes.

Fiscal 2006 compared to Fiscal 2005

The following table sets forth certain operational data as a percentage of net revenue for the fiscal years indicated:

	Years Ended September 30,	
	2006	2005
Net revenues	100.0%	100.0%
Cost of sales	73.9%	72.5%
Gross margin	26.1%	27.5%
Selling, general and administrative	20.5%	26.2%
Restructuring charge	0.5%	—
Research and development	1.1%	2.2%
Operating income (loss)	4.0%	(0.9)%
Interest and other income (expense), net	—	0.3%
Income (loss) before income taxes	4.0%	(0.6)%
Income tax provision	0.7%	0.3%
Net income (loss)	3.3%	(0.9)%

Net Revenue

	Years Ended September 30,			
Net Revenue	**2006**	**2005**	**Inc. (Dec)**	**%**
	(dollars in thousands)			
Semiconductor Equipment Segment	$33,363	$20,668	$12,695	61%
Polishing Supplies Segment	7,082	7,231	(149)	(2)%
Net revenues	$40,445	$27,899	$12,546	45%

Overall growth in net revenue in fiscal 2006 was primarily due to a beginning backlog of $14.4 million, a robust semiconductor equipment market, and increasing penetration into the solar market. Net revenue in fiscal 2006 was positively impacted by the shipment of a $5.2 million multi-furnace order in the quarter ended March 31, 2006, for which there was no corresponding order of similar magnitude in fiscal 2005. In addition, net revenue in fiscal 2006 was positively impacted by revenue related to the solar industry of approximately $2.8 million versus $1.4 million in 2005.

The decrease in net revenue of the polishing supplies segment was due primarily to a decrease in sales of insert carriers.

The following table reflects new orders, shipments and net revenue for each quarter of fiscal 2006 and 2005, on a consolidated basis, as well as for each of our two business segments.

	Fiscal Quarter					Semiconductor Equipment Segment (1)	Polishing Supplies Segment
	First	Second	Third	Fourth(1)	Fiscal Year(1)		
	(dollars in thousands)						
2006:							
New orders (2)	$11,236	$ 6,505	$10,506	$11,410	$39,657	$ 32,577	$ 7,080
Shipments	$ 8,420	$11,378	$10,899	$10,636	$41,333	$ 34,251	$ 7,082

Net revenues	$ 7,915	$10,892	$10,351	$11,287	$40,445	$ 33,363	$ 7,082
Ending backlog	$17,709	$13,322	$13,477	$13,600	$13,600	$ 12,614	$ 986
Book-to-bill ratio	**1.3:1**	**0.6:1**	**1.0:1**	**1.1:1**	**1.0:1**	**1.0:1**	**1.0:1**
2005							
New orders [2]	$ 8,323	$ 5,079	$ 7,152	$14,433	$34,987	$ 27,884	$ 7,104
Shipments	$ 6,952	$ 8,928	$ 5,706	$ 6,888	$28,474	$ 21,235	$ 7,239
Net revenues	$ 7,172	$ 8,915	$ 5,507	$ 6,305	$27,899	$ 20,668	$ 7,231
Ending backlog	$ 8,451	$ 4,615	$ 6,260	$14,388	$14,388	$ 13,400	$ 988
Book-to-bill ratio	**1.2:1**	**0.6:1**	**1.3:1**	**2.1:1**	**1.2:1**	**1.3:1**	**1.0:1**

(1) The backlog as of September 30, 2006 and 2005 includes $0.9 million and $1.0 million, respectively, of open orders or deferred revenue on which we anticipate no gross margin.

(2) Orders are net of cancellations and include the change in the U. S. dollar value of orders recorded in Euros by our semiconductor equipment segment.

Gross Profit

Gross Profit	**Years Ended September 30, 2006**	**2005**	**Inc. (Dec)**	**%**
	(dollars in thousands)			
Semiconductor Equipment Segment	$ 8,461	$5,509	$2,952	54%
Polishing Supplies Segment	2,114	2,159	(45)	(2)%
Total	$10,575	$7,668	$2,907	38%
Gross Margin	26%	27%		

Gross profit increased in fiscal 2006 by $2.9 million, or 38%, over 2005. The increase was driven by higher shipments during the year. Gross margin was 26% in fiscal 2006 compared to 27% in 2005. Major factors that contributed to the decrease in margin percentage were an increase in profit deferred in fiscal 2006 compared to 2005, the recognition of approximately $0.7 million of revenue and an equal amount of costs related to customer acceptance of our small batch vertical furnace and lower margins on the multi-furnace order shipped during fiscal 2006. The decrease in gross margin was also impacted by a change in product mix, as the polishing supplies segment (which has higher gross margins) declined as a percentage of consolidated revenue.

The timing of revenue recognition can have a particularly significant effect on gross margin when the equipment revenue of an order is recognized in one period and the remainder of the revenue attributed to holdbacks is recognized in a later period. The portion of revenue attributed to the holdbacks generally comprises 10-20% of an order and has a significantly higher gross margin percentage.

Selling, General and Administrative Expenses

Selling, general and administrative	**Years Ended September 30, 2006**	**2005**	**Inc. (Dec)**	**%**
	(dollars in thousands)			
Semiconductor Equipment Segment	$7,111	$5,918	$1,193	20%
Polishing Supplies Segment	1,202	1,367	(165)	(12)%
Total	$8,313	$7,285	$1,028	14%

Percent of net revenue	21%	26%

Total selling, general and administrative expenses as a percentage of net revenue decreased to 21% in fiscal 2006 from 26% in 2005, as a result of higher sales. The $1.0 million increase over fiscal 2005 was due to approximately $0.2 million in increased personnel costs to support the increase in revenue and the increased regulatory obligations associated with being a public company, increased commissions of approximately $0.2 million resulting from the increased revenue, $0.2 million in increased non-cash stock-based compensation costs during fiscal 2006 related to the adoption of SFAS 123(R) and increased legal fees associated with the restructuring of our legal entities in Europe and consulting costs for the initial upgrade of the software used to operate and control our operations in Europe.

Restructuring Charges

Restructuring Charge	Years Ended September 30, 2006	2005	Inc. (Dec)	%
	(dollars in thousands)			
Semiconductor Equipment Segment	$ 190	$	$ 190	0%
Polishing Supplies Segment				0%
Total	$ 190	$	$ 190	0%

In June 2006, we adopted a plan to consolidate the manufacturing of our automation product line into facilities already used to manufacture diffusion furnaces. Our automation products are often sold in conjunction with the sale of new diffusion furnaces. As a result of this decision, we recorded $0.2 million of restructuring charges in fiscal 2006.

Research and Development

Reimbursements of costs associated with the preparation and filing of patents and other intellectual property in the form of governmental research and development grants amounted to $0.1 million in fiscal 2006 and 2005 and are netted against these expenses.

Research and Development	Years Ended September 30, 2006	2005	Inc. (Dec)	%
	(dollars in thousands)			
Semiconductor Equipment Segment	$437	$627	$(190)	(30)%
Polishing Supplies Segment				0%
Total	$437	$627	$(190)	(30)%
Percent of net revenue	1%	2%		

Development work on the small batch vertical furnace product line in fiscal 2005 was the primary factor in the $0.2 million decrease in research and development expenses in 2006 compared to the prior year.

Income Tax Provision

In fiscal 2004, we recorded a valuation allowance for the total of our deferred tax assets, including a net operating loss carryforward. As the deferred tax assets increase or decrease, we record an additional tax provision or recognize a benefit, respectively, so that the valuation allowance remains equal to the total of our deferred tax assets. During fiscal 2006, our deferred tax assets declined by $0.2 million, resulting in a decline in our valuation

allowance and an equal amount of tax benefit. This resulted in an effective tax rate for fiscal 2006 of 17.5%. Our future effective income tax rate depends on various factors, such as tax legislation, the geographic composition of our pre-tax income, the level of expenses that are not deductible for tax purposes, changes in our deferred tax assets and the effectiveness of our tax planning strategies.

Fiscal 2005 compared to Fiscal 2004

The following table sets forth certain operational data as a percentage of net revenue for the fiscal years indicated:

	Years Ended September 30,	
	2005	2004
Net revenues	100.0%	100.0%
Cost of sales	72.5%	79.5%
Gross margin	27.5%	20.5%
Selling, general and administrative	26.2%	28.3%
Restructuring charge		
Research and development	2.2%	2.8%
Operating income (loss)	(0.9)%	(10.6)%
Interest and other income (expense), net	0.3%	(0.3)%
Income (loss) before income taxes	(0.6)%	(10.9)%
Income tax provision	0.3%	5.5%
Net income (loss)	(0.9)%	(16.4)%

Net Revenue

The following table reflects the increase in net revenue during fiscal 2005 as compared to 2004:

	Years Ended September 30,		Inc. (Dec)	%
	2005	2004		
	(dollars in thousands)			
Semiconductor Equipment Segment	$20,668	13,215	$7,453	56%
Polishing Supplies Segment	7,231	6,084	1,147	19%
Net revenues	$27,899	$19,299	$8,600	45%

Net revenue from Bruce Technologies products and services, acquired July 1, 2004, accounted for $5.3 million, or 71%, of the increase in net revenue of the semiconductor equipment segment during fiscal 2005, compared to 2004. The $1.1 million increase in the polishing supply segment was primarily due to increased penetration into foreign markets with insert carriers for polishing semiconductor wafers.

There were significant fluctuations in quarterly new orders, shipments and revenue, both within and across years as a result of cyclical industry conditions. The following table reflects trends in consolidated new orders, shipments and net revenue for each quarter during fiscal 2005, and the backlog as of the end of those periods. This table also includes these amounts for the full year in total and for each or our two business segments:

	Semi

	Fiscal Quarter				Fiscal	conductor Equipment	Polishing Supplies
	First	Second	Third	Fourth(1)	Year (1)	Segment (1)	Segment
	(dollars in thousands)						
2005(2)							
New orders (3)	$ 8,323	$ 5,079	$ 7,152	$ 14,433	$ 34,987	$27,884	$7,104
Shipments	$ 6,952	$ 8,928	$ 5,706	$ 6,888	$ 28,474	$21,235	$7,239
Net revenues	$ 7,172	$ 8,915	$ 5,507	$ 6,305	$ 27,899	$20,668	$7,231
Ending backlog	$ 8,451	$ 4,615	$ 6,260	$ 14,388	$ 14,388	$13,400	$ 988
Book-to-bill ratio	**1.2:1**	**0.6:1**	**1.3:1**	**2.1:1**	**1.2:1**	**1.3:1**	**1.0:1**
2004(2)							
New orders (3)	$ 3,684	$ 4,038	$ 4,129	$ 7,103	$ 18,954	$12,927	$6,027
Shipments	$ 3,744	$ 5,697	$ 5,232	$ 5,136	$ 19,809	$13,725	$6,084
Net revenues	$ 3,921	$ 5,631	$ 4,835	$ 4,912	$ 19,299	$13,215	$6,084
Ending backlog	$ 7,408	$ 5,815	$ 5,109	$ 7,300	$ 7,300	$ 6,185	$1,115
Book-to-bill ratio	**1.0:1**	**0.7:1**	**0.8:1**	**1.4:1**	**1.0:1**	**0.9:1**	**1.0:1**

(1) The backlog as of September 30, 2005, includes $1.0 million of deferred revenue for which there is an equal amount of deferred costs, i.e. with no gross profit to be realized.

(2) Amounts include the Bruce Technologies horizontal furnace product line of Kokusai (acquired July 1, 2004) for the periods subsequent to the acquisition.

(3) Orders are net of cancellations and include the change in the U.S. dollar value of orders recorded in Euros by our semiconductor equipment segment.

Net new orders in fiscal 2005 increased to $35.0 million, compared to $19.0 million in 2004. Bruce Technologies product lines acquired July 1, 2004 contributed $5.2 million to the increase. Most of the increase in new orders occurred in the fourth quarter of fiscal 2005, during which $14.4 million of new orders were booked.

Gross Profit

Our gross profit was $7.7 million in fiscal 2005, an increase of 94% compared to 2004. The semiconductor equipment segment contributed $3.0 million of the increase. The increase in both segments was driven primarily by the increased revenue discussed above. However, improved profitability of those sales, as measured by the margins as a percent of net revenue, also contributed to the increase in gross profit. Gross margin for fiscal 2005, as a percent of net revenue increased in the polishing segment, to 30% from 23% in 2004, and in the semiconductor equipment segment, to 27% from 19% in 2004, and on a consolidated basis, to 27%, from 20% in 2004. Performing the laser-cutting operation in-house, rather than incurring the higher cost of subcontracting the work to others, was the primary cause for the increase in the margin percentage in the polishing segment.

Approximately $0.9 million of the improvement in the fiscal 2005 gross margin resulted from the recognition in 2005 of profit deferred by the semiconductor equipment segment in prior years pursuant to our revenue recognition policy. The small increase in the amount of revenue deferred during fiscal 2005 compared to 2004 was more than offset by an increase in deferred cost. In contrast, a significant portion of the revenue deferred in fiscal 2005 to later years was from the first two small batch vertical furnaces delivered during the year for which we deferred $1.0 million of both revenue and costs. For information on the components of deferred profit as of the end of fiscal years 2005 and 2004, refer to Revenue Recognition in Note 1 to our Condensed Consolidated Financial Statements include elsewhere in this prospectus. Another factor contributing to the improvement in the gross profit percentage of the semiconductor and solar segment was a reduction in the amount of inventory write-downs to $0.3 million in fiscal 2005, as compared to $0.6 million in 2004, resulting from increased operating activities. Discontinuation of an automation product contributed to the inventory write-downs in fiscal

2005. The higher write-offs in fiscal 2004 are primarily due to approximately $0.3 million of excess inventory acquired from Kokusai written-down from the value at which it was included in the audited financial statements of the acquired business. Sales of inventory written down in prior periods were not significant.

The timing of revenue recognition has a particularly significant effect on gross margin when the equipment revenue of an order is recognized in one period and the remainder of the revenue attributed to installation, generally 10-20% of the order, is recognized in a later period, because the latter revenue has a significantly higher gross margin percentage.

Selling, General and Administrative Expenses

Total selling, general and administrative expenses increased $1.8 million in fiscal 2005, or 34%, compared to 2004. The increase was primarily due to the Bruce Technologies acquisition which added $1.2 million of expense. Additional increases include increased audit fees of $0.2 million and increased commissions and royalties of $0.3 million, resulting from higher sales representative commissions and the increased sales of insert carriers.

Research and Development Expenses

Development work on the small batch vertical furnace product line was the primary factor in the $0.1 million increase in research and development expenses during fiscal 2005 compared to the prior year.

Income Tax Provision

Our income tax provision was $1.0 million higher in fiscal 2004 than in 2005, because it was in 2004 that we provided an allowance for all of our deferred tax assets. Our future effective income tax rate depends on various factors, such as tax legislation, the geographic composition of our pre-tax income, the level of expenses that are not deductible for tax purposes and the effectiveness of our tax planning strategies.

As we recognize profits, we will offset the income tax expense by the reversal of the valuation allowance, up to the current tax expense, until fully reversed or until it has been determined the valuation allowance is no longer needed. Despite the book loss before income taxes, we incurred some alternative minimum tax and were taxable in certain states, which resulted in a provision for income taxes of $0.1 million.

LIQUIDITY AND CAPITAL RESOURCES

In February 2007, we completed the sale of 3,018,750 shares of common stock in a public offering for $7.05 per share. The net proceeds of the sale after offering expenses and underwriting fees was $19.4 million. We intend to use the remaining net proceeds from this offering for working capital and other general corporate purposes, including possible future product or business acquisitions in connection with the planned expansion of our solar and semiconductor businesses.

As of June 30, 2007 and September 30, 2006, cash and cash equivalents were $17.9 million and $6.4 million, respectively. Our working capital increased $17.8 million to $29.7 million as of June 30, 2007, compared to $11.9 million as of September 30, 2006. Our ratio of current assets to current liabilities increased to 4.1:1 as of June 30, 2007, from 2.6:1 as of September 30, 2006. The increase in cash and cash equivalents and working capital and the improvement in the current ratio resulted primarily from the $19.4 million of net proceeds raised from the public offering of common stock during February 2007. The increase was partially offset by $3.5 million of capital expenditures, primarily a building acquired in The Netherlands, which is expected to increase the capacity of our semiconductor and solar equipment segment. We intend to mortgage the new facility once improvements have been made and operations have been transferred.

As of June 30, 2007, our principal sources of liquidity consisted of $17.9 million of cash and cash equivalents and the $2.3 million in available domestic and export credit facilities. Our revolving line of credit with Silicon Valley Bank contains certain financial and other covenants. We believe we were in compliance with these covenants as of June 30, 2007. Effective June 30, 2007, the $1.0 million export credit facility was terminated at

the request of, and at no cost to us. We believe that our principal sources of liquidity discussed above and the increased capital and liquidity resulting from the February 2007 public offering and this offering are sufficient to support operations and will allow us to pursue our growth strategies, which include possible acquisitions.

The table below provides selected consolidated cash flow information (in thousands) for our fiscal 2004, 2005 and 2006 and for our nine months ended June 30, 2007 and 2006:

	Fiscal Years Ended September 30,			Nine Months Ended June 30,	
	2006	2005	2004	2007	2006
		(audited)		(unaudited)	
Net cash provided by (used in) operating activities	$ 3,335	$ (323)	$ (1,166)	$ (4,087)	$ 413
Net cash used in investing activities	$ (956)	$ (279)	$ (4,678)	$ (3,805)	$ (602)
Net cash provided by financial activities	$ 782	$ 2,302	$ 15	$ 19,529	$ 550

Cash Flows from Operating Activities

Cash used in our operating activities was $4.1 million for the nine months ended June 30, 2007, compared to $0.4 million provided by such activities for the nine months ended June 30, 2006. During the nine months ended June 30, 2007, cash was primarily used to finance business growth, including increases in accounts receivable ($4.7 million), inventory ($1.9 million) and prepaid and other assets ($0.6 million). This use of cash was partially offset by increases in accrued liabilities and customer deposits of $1.2 million, deferred profit of $0.7 million and accrued income taxes of $0.3 million.

Cash provided by our operating activities was $3.3 million in fiscal 2006, compared to $0.3 million of cash used in such activities during 2005. Cash provided by our fiscal 2006 operating activities consisted of $1.3 million of net income, $1.0 million of non-cash expense adjustments (including $0.6 million of depreciation and amortization, $0.2 million of stock-based compensation, $0.1 million of inventory write downs) and $1.0 million of cash provided from net changes in operating assets and liabilities. The cash provided by net changes in operating assets and liabilities was primarily provided by an increase of $2.4 million in accounts payable, the refund of $0.6 million of income taxes, an increase of $0.6 million of accrued liabilities and deferred profit, a $0.1 million provision of currently payable income taxes and a $0.3 million decrease in prepaid expenses and other assets. These changes were partially offset by increases of $2.3 million in accounts receivable and $0.7 million in inventory.

As of September 30, 2006, we had $5.7 million in purchase obligations compared to $2.7 million at the end of fiscal 2005. The increase in purchase obligations was a result of the significant portion of the year-end backlog that was scheduled for shipment during the first quarter of fiscal 2007, an increase in volume purchasing designed to reduce costs, and longer lead-times required by our suppliers. During fiscal 2006, we received $0.6 million of domestic and foreign federal income tax refunds as a result of the carryback of prior year net operating losses and our utilization of the remaining net operating losses to offset taxable income. In contrast, during 2007 we paid the 2006 tax liability of $0.3 million and quarterly estimates based on expected taxable income.

Cash Flows from Investing Activities

Our investing activities for the nine months ended June 30, 2007 and 2006 used $3.8 million and $0.6 million of cash, respectively. During fiscal 2007, the most significant investment was the purchase of a 48,000 sq. ft. manufacturing facility located in Vaassen, The Netherlands for approximately $3.1 million. Another significant investment in fiscal 2007 was $0.3 million paid for a license to certain solar PECVD technology from the licensor. Other investments in both periods consisted primarily of purchases of equipment.

We used $1.0 million of cash in fiscal 2006 primarily to purchase equipment used to expand the polishing supplies segment product line and, within the semiconductor equipment segment, to upgrade information systems and to purchase research and development equipment. This compares to $0.3 million of cash used to purchase property, plant and equipment in fiscal 2005.

Cash Flows from Financing Activities

Cash provided by financing activities for the nine months ended June 30, 2007 was $19.5 million, which primarily consists of the $19.4 million, net of expenses, raised in our common stock offering. Other financing activities during the first nine months of fiscal 2007 include the October 2006 equipment financing of $0.4 million and $0.3 million of payments on debt. This compares to $0.6 million of cash provided by financing activities during the nine months ended June 30, 2006, primarily from the exercise of warrants and stock options.

Cash provided by our financing activities was $0.8 million in fiscal 2006, consisting primarily of $0.8 million from the exercise of warrants and stock options, $0.1 million of net short-term bank borrowings on a line of credit and $0.1 million excess tax benefit of stock options. This was partially offset by $0.1 million of net payments on long-term obligations and $0.1 million in cash dividends paid on preferred stock. This compares to $2.3 million of cash provided by financing activities in fiscal 2005, primarily from the issuance of preferred stock and other borrowings.

We currently anticipate that our existing cash balances, the cash that we expect to generate from our operating activities and this offering and available borrowings under our lines of credit will be sufficient to meet our anticipated cash needs for current operations for at least the next 12 months.

Off-Balance Sheet Arrangements

As of June 30, 2007, we did not have any off-balance sheet arrangements as defined by SEC regulations.

Contractual Obligations and Commercial Commitments

Significant changes in contractual obligations since the end of fiscal 2006 consist mainly of increases in our purchase obligations and long-term debt (See Notes 1 and 7 to our Condensed Consolidated Financial Statements included elsewhere in this prospectus). In April, 2007, we also committed, under a licensing agreement, to pay an additional $0.7 million to a third party for the successful development of a product to be licensed by us.

We had the following contractual obligations and commercial commitments as of June 30, 2007:

Contractual obligations	Total	Less than 1 year	1-3 years	3-5 years	More than 5 years
		(dollars in thousands)			
Long-term debt obligations	$ 993	$ 220	$ 257	$ 144	$ 372
Operating lease obligations:					
Buildings	1,124	432	434	258	
Office equipment	106	22	44	40	
Vehicles	205	117	81	7	
Total operating lease obligations	1,435	571	559	305	
Purchase obligations	6,293	6,293			
Total	$ 8,721	$ 7,084	$ 816	$ 449	$ 372
Other commercial obligations:					
License agreement	$ 700	$ 700	$	$	$

Since the end of fiscal 2006 we have increased our contractual obligations through $0.4 million of long-term debt borrowings secured by certain machinery and equipment purchased during 2006. (See note 15 to our Condensed Consolidated Financial Statements included elsewhere in this prospectus.) The annual contractual repayment obligation under this financing is approximately $0.1 million per year for the five years ending in fiscal 2011.

Critical Accounting Policies

Management's Discussion and Analysis of Financial Condition and Results of Operations discusses our consolidated financial statements that have been prepared in accordance with accounting principles generally accepted in the United States of America. The preparation of these financial statements requires us to make estimates and assumptions that affect the reported amount of assets and liabilities at the date of the financial statements, the disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenue and expenses during the reporting period.

On an on-going basis, we evaluate our estimates and judgments, including those related to revenue recognition, inventory valuation, accounts receivable collectibility, warranty and impairment of long-lived assets. We base our estimates and judgments on historical experience and on various other factors that we believe to be reasonable under the circumstances. The results of these estimates and judgments form the basis for making conclusions about the carrying value of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions.

A critical accounting policy is one that is both important to the presentation of our financial position and results of operations, and requires management's most difficult, subjective or complex judgments, often as a result of the need to make estimates about the effect of matters that are inherently uncertain. These uncertainties are discussed in "Risk Factors" in this prospectus. We believe the following critical accounting policies affect the more significant judgments and estimates used in the preparation of our consolidated financial statements.

Revenue Recognition. We review product and service sales contracts with multiple deliverables to determine if separate units of accounting are present in the arrangements. Where separate units of accounting exist, revenue is allocated to delivered items equal to the total sales price less the greater of the relative fair value of the undelivered items, and all contingent portions of the sales arrangement.

We recognize revenue when persuasive evidence of an arrangement exists; the product has been delivered and title has transferred, or services have been rendered; the seller's price to the buyer is fixed or determinable; and collectibility is reasonably assured. For us, this policy generally results in revenue recognition at the following points:

- For the semiconductor equipment segment, transactions where legal title passes to the customer upon shipment, we recognize revenue upon shipment for those products where the customer's defined specifications have been met with at least two similarly configured systems and processes for a comparably

situated customer. However, a portion of the revenue associated with certain installation-related tasks, equal to the greater of the relative fair value of those tasks or the portion of the contract price contingent upon their completion, generally 10%-20% of the system's selling price, or the "holdback", and directly related costs, if any, are deferred and recognized into income when the tasks are completed. Since we defer only those costs directly related to installation or other unit of accounting not yet delivered and the portion of the contract price is often considerably greater than the fair market value of those items, our policy at times will result in deferral of profit that is disproportionately greater than the deferred revenue. When this is the case, the gross profit recognized in one period will be lower and the gross profit reported in a subsequent period will improve.

- For products where the customer's defined specifications have not been met with at least two similarly configured systems and processes, the revenue and directly related costs are deferred at the time of shipment and recognized into income at the time of customer acceptance or when this criterion has been

met. We have, on occasion, experienced longer than expected delays in receiving cash from certain customers pending final installation or system acceptance. If some of our customers refuse to pay the final payment, or otherwise delay final acceptance or installation, the deferred revenue would not be recognized, adversely affecting our future operating results.

- Equipment sold by the polishing supplies segment does not include process guarantees, acceptance criteria or holdbacks; therefore, the related revenue is recorded upon transfer of title which is generally at time of shipment. Our shipping terms for both segments are customarily FOB our shipping point or equivalent terms.

- For all segments, sales of spare parts and consumables are recognized upon shipment, as there are no post shipment obligations other than standard warranties.

- Service revenue is recognized upon performance of the services requested by the customer. Revenue related to service contracts is recognized ratably over the period of the contract or in accordance with the terms of the contract, which generally coincides with the performance of the services requested by the customer.

Deferred Tax Asset Valuation Allowance. We currently have significant deferred tax assets resulting from expenses not currently deductible for tax purposes, revenue recognized for tax purposes but deferred for financial statement purposes and net operating loss carryforwards that will reduce taxable income in future periods. During fiscal 2004, we recorded a valuation allowance for the total of our deferred tax assets. SFAS No. 109 requires a valuation allowance be established when it is more likely than not that all or a portion of deferred tax assets will not be realized. It also states that it is difficult to conclude that a valuation allowance is not needed when there is negative evidence such as cumulative losses in recent years. Therefore, the cumulative losses weigh heavily in the overall assessment. Each quarter, we analyze each deferred tax asset to determine the amount that is more likely than not to be realized, based upon the weight of available evidence, and adjust the valuation allowance to the amount of deferred taxes that do not meet the criteria for recognition under SFAS No. 109.

Inventory Valuation. We value our inventory at the lower of cost (first-in, first-out method) or net realizable value. We regularly review inventory quantities and record a write-down for excess and obsolete inventory. The write-down is primarily based on historical inventory usage adjusted for expected changes in product demand and production requirements. However, our industry is characterized by customers in highly cyclical industries, rapid technological changes, frequent new product developments and rapid product obsolescence. While the inventories acquired in the Bruce Technologies transaction, which is described elsewhere in this prospectus, will require several years to consume in production and through spare parts sales, management believes the write-downs taken are sufficient to protect against future losses, as this product line is receiving greater attention under its current ownership. Changes in demand for our products and product mix could result in further write-downs.

Allowance for Doubtful Accounts. We maintain an allowance for doubtful accounts for estimated losses resulting from the inability of our customers to make required payments. This allowance is based on historical experience, credit evaluations, specific customer collection history and any customer-specific issues we have identified. Since a significant portion of our revenue is derived from the sale of high-value systems, our accounts

receivable are often concentrated in a relatively few number of customers. A significant change in the liquidity or financial position of any one of these customers could have a material adverse impact on the collectibility of our accounts receivable and our future operating results.

Warranty. We provide a limited warranty, generally for 12 to 24 months, to our customers. A provision for the estimated cost of providing warranty coverage is recorded upon shipment of all systems. On occasion, we have been required and may be required in the future to provide additional warranty coverage to ensure that the systems are ultimately accepted or to maintain customer goodwill. While our warranty costs have historically been within our expectations and we believe that the amounts accrued for warranty expenditures are sufficient for all systems sold through June 30, 2007, we cannot guarantee that we will continue to experience a similar

level of predictability with regard to warranty costs. In addition, technological changes or previously unknown defects in raw materials or components may result in more extensive and frequent warranty service than anticipated, which could result in an increase in our warranty expense.

Impairment of Long-lived Assets. We periodically evaluate whether events and circumstances have occurred that indicate the estimated useful lives of long-lived assets or intangible assets may warrant revision or that the remaining balance may not be recoverable. Goodwill is also tested for impairment at least annually. When factors indicate that an asset should be evaluated for possible impairment, we use an estimate of the related undiscounted net cash flows generated by the asset over the remaining estimated life of the asset in measuring whether the asset is recoverable. We make judgments and estimates used in establishing the carrying value of long-lived or intangible assets. Those judgments and estimates could be modified if adverse changes occurred in the future resulting in an inability to recover the carrying value of these assets. We have not experienced any impairment to long-lived assets during fiscal 2007, 2006 or 2005. Future adverse changes could be caused by, among other factors, a downturn in the semiconductor industry, a general economic slowdown, reduced demand for our products in the marketplace, poor operating results, the inability to protect intellectual property or changing technologies and product obsolescence.

Impact of Recently Issued Accounting Pronouncements

For discussion of the impact of recently issued accounting pronouncements, see the section titled Impact of Recently Issued Accounting Pronouncements contained in Note 1 to our Condensed Consolidated Financial Statements included elsewhere in this prospectus.

OUR BUSINESS

Amtech was incorporated in Arizona in October 1981, under the name Quartz Engineering & Materials, Inc. We changed to our present name in 1987. We conduct operations through four wholly-owned subsidiaries: Tempress Systems, Inc., a Texas corporation with all of its operations in The Netherlands, acquired in 1994, also referred to herein as Tempress Systems or Tempress; P.R. Hoffman Machine Products, Inc., an Arizona corporation based in Carlisle, Pennsylvania, acquired in July 1997, or PR Hoffman; Bruce Technologies, Inc., a Massachusetts corporation based in Billerica, Massachusetts, acquired in July 2004, or Bruce Technologies; and R2D Ingenierie SAS, or R2D, French corporation located in Montpellier, France, acquired in October 2007.

We are a leading supplier of horizontal diffusion furnace systems used for solar (photovoltaic) cell and semiconductor manufacturing, and are recognized in the markets we serve for our technology and our brands. We operate in two business segments: (i) semiconductor and solar equipment and (ii) polishing supplies. Our semiconductor and solar equipment is sold under the well-known and respected brand names of Tempress Systems and Bruce Technologies, which have customers in both the semiconductor industry and the solar industry. Within the semiconductor industry, we provide equipment to manufacturers of analog, power, automotive and microcontroller chips with geometries greater than 0.3 micron, denoted as µ, a strategy we believe minimizes direct competition with significantly larger suppliers of semiconductor equipment. Within the solar industry, we provide diffusion and automation equipment to solar cell manufacturers. Under the PR Hoffman brand, we believe we are also a leading supplier of insert carriers to manufacturers of silicon wafers, and we provide lapping and polishing consumable products as well as equipment used in various industries.

We have been providing manufacturing solutions to the semiconductor industry for over 30 years and are leveraging our semiconductor technology and industry presence in an effort to capitalize on growth opportunities in the solar industry. Our customers use our furnaces to manufacture semiconductors, solar cells, silicon wafers and microelectromechanical systems, or MEMS, which are used in end markets such as telecommunications, consumer electronics, computers, automotive, hand-held devices and solar industry products. To complement our research and development efforts, we also sell our furnaces to research institutes and universities.

For the nine months ended June 30, 2007, we recognized net revenue of $32.9 million, which included $8.1 million of solar revenue or approximately 25% of our total revenues. These results compare to $29.2 million of net revenue for the nine months ended June 30, 2006, which included $2.3 million of solar revenues or approximately 8% of our total revenues. Our order backlog as of June 30, 2007 and 2006 was $20.7 million and $13.5 million, respectively, a 53% increase. Our backlog as of June 30, 2007 included approximately $11.5 million of orders

from our solar industry customers compared to $3.1 million of orders from our solar industry customers as of June 30, 2006. Because our orders are typically subject to cancellation or delay by the customer, our backlog at any particular point in time is not necessarily representative of actual sales in subsequent periods, nor is backlog any assurance that we will realize revenue or profit from completing these orders.

Orders from the solar industry, which consist of backlog and shipped orders, totaled $21.4 million during fiscal 2007, compared to $8.0 million and $3.8 million in all of 2006 and 2005, respectively.

Amtech Systems, Inc.
Solar Orders Growth
(in millions)

We expect the solar industry to continue to grow as a result of greater interest in environmentally friendly energy alternatives, increased costs of fossil fuels and increased global demand for electricity, as well as the solar industry's efforts to reduce manufacturing costs and concern over the world's dependence on oil. We plan to continue capitalizing on this trend by improving our existing products and expanding the number of process steps for which we provide manufacturing equipment to the solar industry. We intend to accomplish this by increasing our solar sales and marketing activities and by acquiring and developing additional products for this industry.

RECENT DEVELOPMENTS

Acquisition of Solar Cell Automation Technology. On October 8, 2007, through our wholly-owned subsidiary, Tempress Holding B.V., we acquired R2D Ingenierie, or R2D, a solar cell and semiconductor automation equipment manufacturing company, located in Montpellier, France. R2D has provided solutions to the solar and semiconductor industries since 1989 and recognized net revenue of $4.9 million in 2006. The automation products sold by R2D are used in several steps of the semiconductor manufacturing processes and for the solar diffusion process. We believe R2D's automation know-how provides a significant point of differentiation from our competitors and provides us the capability to expand the automation solutions we are able to provide to our current and future solar industry customers. We believe the acquisition of the technology and business of R2D enhances our growth strategy by allowing us to increase our sales by offering an integrated system under the Tempress brand to the solar industry.

Under the agreement, we acquired all of the outstanding shares of R2D for a total purchase price of approximately $6.1 million and made a working capital infusion of $1.0 million that was used to satisfy certain outstanding obligations. The purchase price includes significant contingent incentive provisions tied to R2D's successful product improvements, production and technology delivery. Additionally, R2D's key personnel have signed three-year employment agreements.

Partnering to Develop and Market an Antireflective Coating System for Solar Cells. In April 2007, we entered into a licensing and manufacturing agreement to develop and market an antireflective coating system for solar cells with PST Co., LTD., a South Korean producer of vertical thermal processing systems for high-end memory-chip semiconductor applications. This plasma enhanced chemical vapor deposition, or PECVD, system is used in high-volume solar cell manufacturing, and is an important step in the solar cell manufacturing process, as is our diffusion process. The licensing agreement allows us to market PST's existing and future PECVD systems to high-volume solar cell manufacturers throughout the term of the agreement, which we believe will enable us to develop new customer relationships. The royalty free, 10-year licensing agreement will enable us to sell this product to our solar customer base through our extensive global sales and marketing network on an exclusive basis, with the exception of sales in Korea and to one existing Japanese customer of PST, for which PST retains exclusive rights.

Expansion of Solar Manufacturing Plant Capacity. In March 2007, we acquired a 48,000 square foot manufacturing plant located in Vaassen, The Netherlands, near our existing plant where most of our solar cell equipment is currently manufactured. This facility, which will replace our current facility, significantly increases

our European manufacturing capacity, and we believe it will improve the operating efficiencies of both our solar cell and semiconductor equipment manufacturing in fiscal 2008.

Penetration of the Asia-Pacific Market. We have continued to increase our sales into the Asia-Pacific market and we expect further growth in export opportunities to this region. In the nine months ended June 30, 2007, our sales into the Asia-Pacific market increased by 23% compared to the same period in 2006, driven primarily by sales to our solar industry customers. The Asia-Pacific region continues to be an important and expanding market for us because of the continued migration of solar cell and semiconductor manufacturing to countries in that market.

Partnering to Manufacture Advanced Vertical Microwave System. In May 2007, we entered into a manufacturing agreement with DSG Technologies, a California-based developer of low temperature, microwave heating and curing systems used in fabricating integrated circuits. Under this agreement we expect to manufacture a vertical microwave reactor system that utilizes both our small-batch vertical furnace platform and DSG□s microwave heating technology. This new product is designed to be used for the curing processes on advanced sub-50nm semiconductor devices.

COMPETITIVE STRENGTHS

We believe that we are a leader in the markets we serve as a result of the following competitive strengths:

Leading Market Share and Recognized Brand Names. The Tempress, Bruce Technologies and PR Hoffman brands have long been recognized in our industry and identified with high-quality products, innovative solutions and dependable service. We believe that our brand recognition and experience will continue to allow us to capitalize on current and future market opportunities in the solar industry.

We have been providing horizontal diffusion furnaces and polishing supplies and equipment to our customers for over 30 years. We have sold and installed over 900 horizontal furnaces worldwide and benefit from what we believe to be the largest installed customer base in the semiconductor industry, which we believe offers an opportunity for replacement and expansion demand. Customers that have purchased our furnaces can leverage their investment in training, spare parts inventory and other costs by acquiring additional equipment from us. We also have an extensive retrofit, parts and service business, which typically generates higher margins than our equipment business.

Experienced Management Team. We are led by a highly experienced management team. Our CEO has over 34 years of industry experience, including 26 years with our company. Our four general managers have an average of over 19 years of semiconductor and solar industry experience and an average of 17 years with our company (including our predecessor companies).

Established, Diversified Customer Base. We have long-standing relationships with many of our top customers, which we believe remain strong. We maintain a broad base of customers, including leading solar cell manufacturing companies, as well as semiconductor and wafer manufacturing companies. During the nine months ended June 30, 2007, our largest customer accounted for approximately 12% of our net revenue and our top 10 customers collectively represented approximately 52% of our net revenue. In fiscal 2006, our largest customer accounted for approximately 17% of our net revenue, and our top 10 customers collectively represented approximately 58% of our net revenue. In fiscal 2005, no single customer accounted for more than 10% of our net revenue. Our largest customer has been different in each of the last three fiscal years.

Proven Acquisition Track Record. Over the last twelve years we have developed an acquisition program that has resulted in the acquisition of four significant businesses.

In October 2007, we acquired R2D Ingenierie, a solar and semiconductor automation company located in Montpellier, France. We believe the acquisition of the technology and business of R2D enhances our growth strategy by allowing us to increase our sales by offering an integrated system under the Tempress brand to the solar industry.

In July 2004, we acquired the Bruce Technologies line of semiconductor horizontal furnace operations, product lines and other assets from Kokusai, a wholly owned subsidiary of Hitachi, Japan and its affiliate, Kokusai Electric Europe, GmbH. We continue to market the horizontal furnace product line under the name Bruce Technologies. Bruce Technologies has a large installed base, including several large semiconductor manufacturers.

In July 1997, we acquired substantially all of the assets of PR Hoffman. This acquisition enabled us to offer new consumable products, including lapping and polishing carriers, polishing templates, lapping and polishing machines and related consumable and spare parts to our existing customer base as well as to target new customers.

In 1994, we acquired certain assets of Tempress and hired Tempress's engineers to develop our first models of the Tempress horizontal diffusion furnaces for production in The Netherlands.

Technical Expertise. We have highly trained and experienced mechanical, chemical, environmental, electronic, hardware and software engineers and support personnel. Our engineering group possesses core competencies in product applications and support systems, automation, sophisticated controls, chemical vapor deposition, diffusion and pyrogenic processes, robotics, vacuum systems, ultra clean applications and software driven control packages. We believe this expertise enables us to design, develop and deliver high-quality, technically-advanced integrated product solutions for solar cell and semiconductor manufacturing customers.

Leading Technology Solutions and New Product Development. We pursue a partnering-based approach, in which our engineering and development teams work closely with our customers to ensure our products are tailored to meet our customers' specific requirements. We believe this approach enables us to more closely align ourselves with our customers and provide them with superior systems.

We believe our line of horizontal diffusion furnaces, which allow high wafer-per-hour throughput, is more technologically advanced and reliable than most of our competitors' equipment. In addition, the processing and temperature control systems within the furnace provide diverse and proven process capabilities, which enable the application of high-quality films onto silicon wafers. We believe our recently acquired R2D solar automation technology will provide efficiencies in the manufacturing process that will allow our customers to be more competitive in their respective markets.

We developed a small batch vertical furnace jointly with a major European customer and are currently developing five different thin film processes for use with this furnace. We retain full ownership of this technology. We shipped two of these systems in fiscal 2005 and one in 2006. In addition, in 2007, we shipped a small batch vertical furnace utilizing DSG's microwave technology to DSG.

In 2007, we also began selling precision thickness wafer carriers. This is an internally developed product that we expect will increase our sales to the wafer carrier market.

Geographically Diverse Customer Base. We believe that our geographically diverse revenue stream helps to minimize our exposure to fluctuations in any one market, and to maximize our access to potential customers relative to our competitors with geographically concentrated operations. The geographic distribution of our net revenues from fiscal 2004 through 2006 anticipated net revenues for 2007 is as follows:

	Fiscal Year Ended September 30,			Nine Months Ended June 30,
	2004	**2005**	**2006**	**2007**
Asia-Pacific	33%	36%	41%	48%
North America	36%	40%	35%	29%
Europe	31%	24%	24%	23%

GROWTH STRATEGY

We intend to leverage our competitive strengths through a combination of internal and external growth strategies.

Internal Growth. Our strategy for internal growth includes: capitalizing on growth opportunities in the solar industry and the Asia-Pacific market; accelerating new product and technology development; enhancing our sales and marketing capabilities; and leveraging our installed base.

Capitalizing on Growth Opportunities in the Solar Industry. We have had recent success in increasing our sales to the solar industry. Our fiscal 2007 solar orders, which consist of backlog and shipped orders, totaled $21.4 million, compared to $8.0 million and $3.8 million in fiscal 2006 and 2005, respectively. We believe the increase in orders from solar cell manufacturers is due to our focused product development and marketing efforts, as well as to growing overall demand from the solar industry. We believe that growth in the solar industry will be driven by rising energy demand, the increasing scarcity of traditional energy resources coupled with rising prices, the growing adoption of government incentives for solar energy due to increasing environmental awareness and concern about energy independence, the gradually decreasing cost of solar energy and the changing consumer preferences toward renewable energy sources.

Capitalizing on Growth Opportunities in the Asia-Pacific Market. With our extensive global knowledge and experience, particularly in Asia, we intend to further leverage our established sales channels in the Asia-Pacific market for current and future products. The Asia-Pacific region continues to be an important and expanding market for us, particularly because of the continuing migration of solar cell and semiconductor manufacturing to countries in that region. According to *Solar Plaza*, total solar cell production in China is expected to grow from 600 MWp in 2005 to 2,200 MWp in 2010 for a CAGR of 30%. For the nine months ended June 30, 2007, we have increased our sales into the Asia-Pacific market by 23% compared to the same period in 2006 This increase is primarily driven by solar equipment sales.

Accelerating New Product and Technology Development. We are focused on developing new products across our business in response to customer needs in various markets.

Small Batch Vertical Furnace. At $1.5 billion annually, the vertical furnace market is much larger than the horizontal furnace market that we have served historically. Our entry product into the vertical furnace market is a two-tube small batch vertical furnace for wafer sizes of up to 200mm, with each tube having a small flat zone capable of processing 25-50 wafers per run. We are targeting small batch niche applications in the vertical furnace market first, since the competition in the large batch vertical furnace market is intense and our competitors are much larger and have substantially greater financial resources, processing knowledge and advanced technology. We believe our large installed customer base increases the market to which we can sell our small batch vertical furnaces and other new products.

Precision Thickness Wafer Carrier. Wafer carriers are work holders into which silicon wafers or other materials are inserted for the purpose of holding them securely in place during the lapping and polishing processes. Many customers thin their wafer carriers to precise tolerances to meet their various applications. We internally developed and began selling precision thickness wafer carriers in 2007.

Enhancing our Sales and Marketing Capabilities. In order to increase sales and improve customer service globally, we intend to continue integrating our Bruce Technologies and Tempress sales and marketing teams and transitioning them from being product oriented to being regionally focused. We also intend to hire additional senior management to expand our existing solar sales and marketing efforts.

Leveraging our Installed Base. We intend to continue leveraging our relationships with our customers to maximize parts, system, service and retrofit revenue from the large installed base of Bruce Technologies and Tempress brand horizontal diffusion furnaces. We intend to accomplish this by meeting these customers needs for replacement systems and additional capacity, including equipment and services in connection with any of our customers relocation to, or expansion efforts in, Asia.

External Growth. We intend to selectively seek strategic growth opportunities through acquisitions, joint ventures, geographic expansion and the development of additional manufacturing capacity.

Pursuing Strategic Acquisitions that Complement our Strong Platform. Over the last twelve years, we have developed an acquisition program and have completed the acquisition of four significant businesses.

Based on a disciplined acquisition strategy, we continue to evaluate potential technology, product and business acquisitions or joint ventures that are intended to increase our existing market share in the solar industry and expand the number of front-end semiconductor processes addressed by our products. In evaluating these opportunities, our objectives include: enhancing our earnings and cash flows, adding complementary product offerings, expanding our geographic footprint, improving our production efficiency and growing our customer base.

SOLAR AND SEMICONDUCTOR INDUSTRIES

We provide products and services primarily to two industries: the solar industry and the semiconductor industry.

Solar Industry

Worldwide Demand For Solar Energy (Total Solar Cell Production)

Solar power has emerged as one of the most rapidly growing renewable energy sources. To date, various technologies have been developed to harness solar energy. The most significant technology is the use of interconnected photovoltaic, or PV, cells to generate electricity directly from sunlight. Most PV cells are constructed using specially processed silicon, which, when exposed to sunlight, generates direct current electricity. Solar energy has many advantages over other existing renewable energy sources and traditional non-renewable energy sources in the areas of environmental impact, delivery risk, distributed nature of generation and matching of peak generation with demand. According to *PHOTON International* published by Solar Verlag GmbH, an independent solar energy research publication, the global PV market, as measured by total PV cell production, increased from 1.2 gigawatts, or GW, in 2004 to 2.6 GW in 2006, which represents a compound annual growth rate, or CAGR, of approximately 36%. During the same period, PV industry revenues grew from approximately $8.0 billion to approximately $20.0 billion. *PHOTON International* projects that total PV cell production, including thin-film and non-conventional production which our products do not address, will increase from 4.0GW in 2007 to 20.5GW in 2011, representing a CAGR of approximately 50%. During the same period, PV industry revenues are projected to grow from approximately $30 billion to approximately $121 billion.

Despite this rapid growth, solar energy currently accounts for only a small fraction of the world□s energy output. We believe that growth in the PV industry will be driven by rising energy demand, the increasing scarcity of traditional energy resources coupled with rising prices, the growing adoption of government incentives for solar energy due

to increasing environmental awareness and concern about energy independence, the gradually decreasing cost of solar energy and the changing consumer preferences toward renewable energy sources. We believe the anticipated continued growth of the PV industry will result in increased investment in PV manufacturing equipment.

Solar power systems are used for residential, commercial and industrial applications and for customers who either have access to or are remote from the electric utility grid. The market for □on-grid□ applications, where solar power is used to supplement a customer□s electricity purchased from the utility network, represents the largest and fastest growing segment of the market. □Off-grid□ markets, where access to utility networks is not economical or physically feasible, and consumer markets both offer additional opportunities for solar technology. Off-grid

industrial applications include road signs, highway call boxes and communications support along remote pipelines, as well as rural residential applications. Consumer applications include outdoor lighting and handheld devices such as calculators.

Semiconductor Industry. Semiconductors control and amplify electrical signals and are used in a broad range of electronic products, including: consumer electronic products, computers, wireless telecommunication devices, communications equipment, automotive electronic products, major home appliances, industrial automation and control systems, robotics, aircraft, space vehicles, automatic controls and high-speed switches for broadband fiber optic telecommunication networks. Semiconductors, or semiconductor chips, solar cells and optical components are manufactured primarily on a silicon wafer and are part of the circuitry or electronic components of many of the products listed above.

The semiconductor industry has experienced significant yet growth since the early 1990s. This growth has been primarily attributable to an increase in demand for personal computers, the growth of the Internet, the expansion of the telecommunications industry, especially wireless communications, and the emergence of new applications in consumer electronics. Further fueling this growth is the rapidly expanding end-user demand for smaller, less-expensive and better-performing electronic products as well as for traditional products with more intelligence. This growing demand has led to an increased number of semiconductor devices in electronic and other consumer products, including automobiles.

Although the semiconductor market has experienced significant growth over the past fifteen years, it remains cyclical by nature. The market is characterized by short-term periods of under- or over-supply for most semiconductors, including microprocessors, memory, power management chips and other logic devices. When demand decreases, semiconductor manufacturers typically slow their purchasing of capital equipment. Conversely, when demand increases, so does capital spending. After the historical peak in 2000, the semiconductor industry experienced one of its most severe downturns in 2001 through the first half of 2003, resulting in a decline in revenue for most manufacturers of semiconductor chips and semiconductor equipment. During the latter part of 2003, the industry began to improve and has continued to improve through 2007.

Industry Manufacturing Processes

Solar Cell Manufacturing Process Flow Chart

(*) Manufacturing process step which involves the use of our products.

A part of our growth strategy involves evaluating opportunities to increase the number of process steps we serve in both the solar cell and semiconductor manufacturing processes by acquiring additional product lines. The solar industry uses many of the same process steps used in semiconductor manufacturing in the high-volume production of solar cells including:

(1)	inspecting for resistivity and mechanical integrity and splitting wafers;
(2)	etching away saw damage with sodium hydroxide and rinsing the wafer with water and concentrated sulphuric acid;
(3)	diffusing oxygen and nitrogen to form a thin-film layer of phosphorous oxychloride on the wafer;
(4)	etching the wafer with fluoric acid to remove the undiffused, phosphorus-silica-glass layer;
(5)	coating an antireflective layer through a chemical vapor deposition (CVD) or plasma enhanced CVD process;

(6) printing rear side contacts;

(7) drying to prevent condensation in the wafer area;

(8) printing aluminum and silver paste on the back surface field to prevent recombination of generated electrons and holes;

(9) drying;

(10) printing front side contacts;

(11) drying and then sintering the contact to form electrical conductive contacts; and

(12) testing and sorting the solar cells into electrical efficiency categories.

Most solar cell manufacturers sell their products to manufacturers of solar modules or solar panels. Others are vertically integrated and use their cells in the production of solar modules and panels. Solar cells are the critical component of solar modules and solar panels, which are sold to the end user and used in residential homes, industrial applications, remote pumping, lighting and heating uses and central power stations.

Semiconductor Front End Manufacturing Process Flow Chart

(*) Manufacturing process steps which involve the use of our products.

Most semiconductor chips are built on a base of silicon, called a wafer, and include multiple layers of circuitry that connect a variety of circuit components, such as transistors, capacitors and other components. To build a chip, the transistors, capacitors and other circuit components are first created on the surface of the wafer by performing a series of processes to deposit and remove selected film layers, including insulators. Similar processes are then used to build the layers of wiring structures on the wafer. These are all referred to as "front-end" processes. A simplified sequence of front-end processes for fabricating typical chips involves:

(1) forming an ingot by pulling molten silicon;

(2) slicing the silicon ingot into wafers of uniform thickness with a wire saw;

(3) lapping and polishing the silicon wafer to a mirror-like finish;

(4) cleaning the wafer;

(5) forming a thin film layer of silicon dioxide on the wafer in a diffusion furnace where oxygen, hydrogen or a combination of the two is introduced to cause a chemical reaction (oxidation) with the silicon wafer's surface;

(6) diffusing impurities (doping) in order to change the wafer's electrical properties.

(7) depositing insulating or conducting layers on the wafer surface, which sometimes is accomplished in a diffusion furnace via a chemical reaction called chemical vapor deposition;

(8) coating and baking a photosensitive material, called photoresist, on the wafer;

(9) creating circuit patterns by exposing the wafer to light directed through a mask with circuit patterns;

(10) removing the soluble portion of the photoresist by placing the wafer in a chemical solution, leaving only the desired pattern;

(11) etching away the exposed areas to create a dimensional pattern on the wafer surface;

(12) creating electrically charged conductive regions by driving ions into the exposed areas of the patterned wafer; and

(13) annealing the wafer through a high temperature process to relieve stress and drive the implanted ions deeper into the wafer.

The silicon wafer may be cycled ten to twenty-five times through these wafer-processing steps, starting each time at step (5) or (7) to form a number of chips on the wafer. The front-end process steps are followed by a number of back-end steps in which the wafers are sliced into individual chips that are then packaged to add connectors that are compatible with the end product in which the chip will be used.

Depending on the device, our polishing supplies segment□s products may be used in lapping and polishing (step 3) and our semiconductor equipment segment□s products may be used in forming silicon dioxide films (step 5), doping (step 6), depositing insulating and conducting layers (step 7) and the annealing processes (step 13).

SEMICONDUCTOR AND SOLAR EQUIPMENT SEGMENT PRODUCTS

Our furnace and automation equipment is manufactured in our facilities in Massachusetts and The Netherlands. The following paragraphs describe the products that comprise our semiconductor equipment segment:

Horizontal Diffusion Furnaces. Through our subsidiaries, Tempress and Bruce Technologies, we produce and sell horizontal diffusion furnaces. Our horizontal furnaces currently address several steps in the semiconductor manufacturing process, including diffusion (step 5 in the semiconductor manufacturing process previously described), phosphorus tetrachloride doping, or $POCl_3$ (step 6), low-pressure chemical vapor deposition, or LPCVD, (step 7), and annealing (step 13). Our horizontal furnaces also currently address diffusion and applying antireflective coating in the solar cell manufacturing process (steps 3 and 5).

Our horizontal furnaces generally consist of three large modules: the load station where the loading of the wafers occurs; the furnace section, which is comprised of one to four reactor chambers; and the gas distribution cabinet where the flow of gases into the reactor chambers is controlled, and often customized to meet the requirements of a customer□s particular processes. The horizontal furnaces utilize existing industry technology and are sold primarily to customers who do not require the advanced automation of, or cannot justify the higher expense of, vertical furnaces for some or all of their diffusion processes. Our models are capable of processing all currently existing wafer sizes.

Small Batch Vertical Furnace. Our small batch, two-tube vertical furnace was developed internally with the active support from a large semiconductor manufacturer and long-term customer. The specifications for this furnace include a two-tube vertical furnace for wafer sizes of up to 200mm, with each tube having a small flat zone capable of processing 25-50 wafers per run. The market for vertical furnaces is much larger than the total of all the other markets we currently serve. We are initially targeting niche applications, including research and development, while we continue to develop additional processes, since the competition in the large batch vertical furnace market is intense and our competitors are much larger and have substantially greater financial resources, processing knowledge and advanced technology. We shipped our first two vertical furnaces in fiscal

2005 and shipped another vertical furnace in 2006.

Conveyor Furnace. We produce conveyor furnaces used to manufacture thick films for the electronics industry. Conveyor furnaces provide for precision thermal processing of electronic parts for thick film applications, including annealing, sealing, soldering, silvering, curling, brazing, alloying, glass-metal sealing and component packaging.

Etch Systems. We manufacture and sell two models of etch systems. Our P2000 series is a fully automated single wafer plasma etch and deposition production system for front- and back-end processing of wafers up to 200mm. The system is used for semiconductor production applications. Etching of silicon, nitrides, oxides, polymers and metals is accomplished safely and reliably in this cost efficient, high performance system. Our PM2000 is a manually loaded small laboratory model that provides fast etch rates using solid state 600 watt generators and a unique chamber design. We acquired this product and process technology in 2004 for a nominal amount. We sold our first two etch systems in 2006.

Automation Products – Semiconductor. Use of our automation products reduces human handling and, therefore, reduces exposure of wafers to particle sources during the loading and unloading of the process tubes and protects operators from heat and chemical fumes. Since the top reactor chamber of a horizontal furnace is as much as eight feet from the floor on which the operator stands when manually loading wafer boats, and typical boats of 150mm to 300mm wafers weigh three to six pounds, automating the wafer loading and unloading of a diffusion furnace improves employee safety and ergonomics in silicon wafer, solar cell and semiconductor manufacturing facilities.

E-300. Our most cost effective automation product is the E-300. This product is most suitable for the lower cost semiconductor devices, such as diodes and power management chips. The E-300 operates like an elevator and generally is used to raise wafer boats loaded with up to 300 wafers to one or both of the upper two reactor chambers of a diffusion furnace.

S-300. Our patented S-300 model provides a very efficient method of automatically transporting a full batch of up to 300 wafers to the designated tube level and automatically placing them directly onto the cantilever loader of a diffusion furnace at one time. This product is suitable for the production of nearly all semiconductors manufactured using a horizontal furnace. The S-300 can be used in conjunction with all current wafer sizes and is particularly well suited for manufacturers of 300mm wafers.

Automation Products – Solar. Our automation technology products are used in several of the semiconductor manufacturing steps and the diffusion processing step in solar cell manufacturing. Our automation equipment includes mass wafer transfer systems, sorters, long-boat transfer systems, load station elevators, buffers and conveyers. We use a vacuum technology for our solar wafer transfer systems designed to ensure high throughput.

Atmoscan and Other Cantilevered Processing Systems. Our Atmoscan product is a controlled environment wafer processing system that includes a cantilever tube used to load silicon wafers into a horizontal diffusion furnace and through which a purging inert gas flows during the process of loading and unloading the reactor chamber. Among the major advantages afforded by the Atmoscan product is increased control of the environment surrounding the wafers during the gaseous and heating/cooling process, resulting in increased yields, decreased manufacturing costs and other economies in the manufacturing process.

POLISHING SUPPLIES SEGMENT PRODUCTS

The products of our polishing supplies segment are used primarily for lapping and polishing raw silicon wafers to a mirror-like finish. Depending on the cycle of the semiconductor industry, approximately two-thirds of this segment's products are sold to either semiconductor wafer manufacturers or specialty semiconductor fabricators. The products of our polishing supplies segment are also sold to fabricators of optics, quartz, ceramics and metal parts, and to manufacturers of medical equipment components and computer disks. We manufacture the products described below in Pennsylvania and sell them under our PR Hoffman brand name.

Wafer Carriers. Carriers are work holders into which silicon wafers or other materials are inserted for the purpose of holding them securely in place during the lapping and polishing processes. We produce carriers for our line of lapping and polishing machines, as well as for those machines sold by our competitors. Substantially all of the carriers we produce are customized for specific applications. Insert carriers, our most significant category of carriers, contain plastic inserts molded onto the inside edge of the work-holes of the carrier, which hold the wafers in place during processing. Although our standard steel carriers are preferred in many applications because of their durability, rigidity and precise dimensions, they are typically not suited for applications involving softer materials or when metal contamination is an issue. Insert carriers, however, are well suited for processing large semiconductor wafers, up to 300mm in diameter, and other fragile materials or where contamination is an issue, because they provide the advantages of steel carriers while reducing the potential for damage to the edges of such sensitive materials. Our insert carriers are used for double-sided lapping or polishing of semiconductor wafers up to 300mm in diameter. We internally developed and began selling precision thickness wafer carriers in 2007.

Semiconductor Polishing Templates. Our polishing templates are used to securely hold silicon wafers in place during single-sided polishing processes. Polishing templates are customized for specific applications and are manufactured to exacting tolerances. We manufacture polishing templates for most brands of tools and various processes. In addition to silicon wafers, these products are used in polishing silicon carbide wafers and sapphire crystals used in LEDs.

Double-Sided Planetary Lapping and Polishing Machines. Double-sided lapping and polishing machines are designed to process thin and fragile materials, such as semiconductor silicon wafers, precision optics, computer disk media and ceramic components for wireless communication devices, to exact tolerances of thickness, flatness, parallelism and surface finish. On average, we believe that we offer our surface processing systems at a lower price than systems offered by our competitors and target the semiconductor, optics, quartz, ceramics, medical, computer disk and metal working markets. During fiscal 2004, we introduced and delivered our first Model 5400 lapping and polishing machine, capable of processing parts up to 19.5 inches in diameter, including 300mm wafers and higher capacities of smaller parts. This new machine is our largest and is superior to our previous model, because it uses servo motors rather than hydraulics and is equipped with a Windows touch-screen interface, for better control of speeds and pressure, optional thickness control, and crash protection. We believe our 5400 model is especially well suited for thin and fragile materials. We also produce and sell a wide assortment of plates, gears, parts and wear items for our own machines and those sold by many of our competitors.

MANUFACTURING, RAW MATERIALS AND SUPPLIES

Our semiconductor equipment manufacturing activities consist primarily of engineering design, procurement and assembly of various commercial and proprietary components into finished diffusion furnace systems in Heerde, The Netherlands, and Billerica, Massachusetts. In March 2007, through our subsidiary, Tempress Holding B.V., we purchased a 48,000 square foot manufacturing facility located in Vaassen, The Netherlands near our existing plant, where we currently manufacture the majority of our solar cell equipment. This purchase will replace our existing facility in Heerde and should alleviate our prior capacity constraints in The Netherlands by adding significant manufacturing space for future growth and should facilitate more efficient production of our product lines for both the solar and semiconductor industries. In 2006, we transferred the production of processing and automation systems to Billerica, Massachusetts from our Tempe, Arizona location to improve efficiencies.

Nearly all of our fabricated parts for the semiconductor equipment segment are purchased from local suppliers. Our manufacturing activities in the polishing supplies and equipment segment include laser-cutting and other fabrication steps in producing lapping and polishing consumables, including carriers, templates, gears, wear items and spare parts in Carlisle, Pennsylvania, from raw materials manufactured to our specifications by our suppliers. Many items, such as proprietary components for our semiconductor equipment and lapping plates, are also purchased from suppliers who manufacture these items to our specifications.

All final assembly and tests of our equipment and machines are performed within our manufacturing facilities. Quality control is maintained through inspection of incoming materials and components, in-process inspection during equipment assembly, testing of assemblies and final inspection and, when practical, operation of

manufactured equipment prior to shipment.

Since much of our polishing supplies segment's know-how relates to the manufacture of its products, this segment's facility is equipped to perform a significantly higher percentage of the fabrication steps required in the production of its products. However, injection molding for our insert carriers and the manufacture of raw cast iron plates are subcontracted out to various third parties. Our polishing supplies segment relies on key suppliers for certain materials, including two steel mills in Germany and Japan, an injection molder, a single-sourced pad supplier from Japan and an adhesive manufacturer. Prior to the fourth quarter of fiscal 2004, we subcontracted the laser-cutting of carriers to third parties. Since then we have purchased an advanced laser-cutting tool which has increased our ability to compete based upon price, delivery lead-times and quality. To minimize the risk of production and service interruptions and/or shortages of key parts, we maintain appropriate inventories of key raw materials and parts. If for any reason we were unable to obtain a sufficient quantity of parts in a timely and cost-effective manner to meet our production requirements, our results of operations would be materially and adversely affected.

BACKLOG

Our backlog as of June 30, 2007 and 2006 was $20.7 million and $13.5 million, respectively, a 53% increase. Our backlog as of June 30, 2007 included approximately $11.5 million of orders from our solar industry customers compared to $3.1 million in orders from solar industry customers as of June 30, 2006. Our backlog as of September 30, 2006 and 2005 was $13.6 million and $14.4 million (including the $5.2 million multi-furnace order from a single customer previously discussed), respectively. Our backlog as of September 30, 2006 included approximately $7.6 million of orders from our solar industry customers. The orders included in our backlog are generally credit approved customer purchase orders expected to ship within the next twelve months. Because our orders are typically subject to cancellation or delay by the customer, our backlog at any particular point in time is not necessarily representative of actual sales for succeeding periods, nor is backlog any assurance that we will realize revenue or profit from completing these orders. Our backlog also includes revenue deferred pursuant to our revenue recognition policy, derived from orders that have already been shipped, but which have not met the criteria for revenue recognition. The backlog as of September 30, 2006 and 2005 included $0.9 million and $1.0 million of open orders or deferred revenue, respectively, on which we anticipate no gross margin.

RESEARCH, DEVELOPMENT AND ENGINEERING

The markets we serve are characterized by evolving industry standards and rapid technological change. To compete effectively in our markets, we must continually keep up with the pace of such change by improving our products and our process technologies and developing new technologies and products that compete effectively on the basis of price and performance and that adequately address current and future customer requirements. We continue to obtain as much customer cooperation and input as possible to increase the efficiency and effectiveness of our research and development efforts. While there can be no assurance that such relationships will continue or that others will be developed, such cooperative efforts are expected to remain a significant element in our future product and technology development projects.

During 2003, we received an order for a newly designed small batch vertical furnace. The specifications for this furnace include a two-tube vertical furnace for wafer sizes of up to 200mm, with each tube having a small flat zone capable of processing 25-50 wafers per run. We anticipate that this furnace will have much of the same process capability as other vertical furnaces in the marketplace, but with a lower cost than most of our competitors. Our first two small batch vertical furnaces were shipped in fiscal 2005 and a third in 2006. Two of these furnaces were accepted in fiscal 2006.

In April 2007, we entered into a licensing and manufacturing agreement to develop and market an antireflective coating system for solar cells with PST Co., LTD., a South Korean producer of vertical thermal processing systems for high-end semiconductor applications. This PECVD system is used in high-volume, solar cell manufacturing and is an important step in the solar cell manufacturing process. The licensing agreement allows us to market PST's existing PECVD system, and for PST to develop and manufacture a new PECVD model for us to market to high-volume solar cell manufacturers.

The royalty free, 10-year licensing agreement will enable us to sell this product to our solar customer base through our extensive global sales and marketing network on an exclusive basis, with the exception of sales in Korea and to one existing customer of PST, for which PST retains exclusive rights. Additionally, we believe this product will enable us develop new customer relationships.

Additionally, in May 2007, we entered into a manufacturing agreement with DSG Technologies, a California-based developer of low temperature, microwave heating and curing systems used in the fabricating of integrated circuits. Under this agreement we will manufacture a vertical microwave reactor system that utilizes both our small-batch vertical furnace platform and DSG's heating technology. This new product will be used for the curing processes on advanced sub-50nm semiconductor devices.

We believe that as the industry approaches the sub-50nm technology era, curing applications will require precise low-temperature control. With DSG's heating technology, uniform temperature control can be achieved because, unlike external heating, microwave heating is volumetric throughout the material. Microwave energy can

also effectively couple with molecular bonds in the films, which significantly reduces the moisture content, a function not currently possible with conventional heating. The system is also expected to reduce curing temperatures, lower operational costs, improve film quality and significantly improve cycle time.

From time to time we add functionality to our products or develop new products during engineering and manufacturing to fulfill specifications in a customer's order, in which case the cost of development, along with other costs of the order, are charged to cost of sales. We periodically receive small research grants for research and development of products in The Netherlands, which are netted against our research and development costs. Our approach to such expenditures has allowed us to produce a number of new products while spending amounts that we believe are generally modest in relation to most semiconductor equipment manufacturers. Our expenditures that have been accounted for as research and development were $376,000 (1% of net revenue) for the nine months ended June 30, 2007, $0.4 million (1.1% of net revenue) in fiscal 2006, $0.6 million (2.2% of net revenue) in 2005, and $0.5 million (2.8% of net revenue) in 2004. For the nine months ended June 30, 2007 we incurred $376,000 (1% of net revenue) in research and development expenses, compared with $372,000 (1% of net revenue) for the same period in 2006. These amounts exclude those expenses incurred in connection with customer orders or supported by government grants.

PATENTS

The following table shows our material patents, the patents licensed by us, and the expiration date of each patent and license:

Product	Country	Expiration Date or Pending Approval
IBAL Model S-300	France	Pending
	Germany	Pending
	The Netherlands	Pending
	Italy	Pending
	United Kingdom	Pending
Atmospheric Pressure Control for Solar Furnace	Europe	Pending
Small Batch Furnace (SBVF)	Europe	Pending
Dual Cylinder Loadport for SBVF	Europe	Pending
Heating Element Wire Spacer	Europe	Pending
Photo CVD	United States	November 15, 2011
Potential Damage-free Asher	United States	September 8, 2018
IBAL Model S-300	United States	July 7, 2019
IBAL Model S-300	United States	July 26, 2019
IBAL Model E-300	United States	July 13, 2021

Fast, Safe, Pyrogenic External Torch Assembly (*)	United States	December 17, 2011
Method and Manipulation for the Transport	France	April 6, 2021
of Disk-Shaped Memory Devices for Electronic	Germany	April 2, 2022
and Computer Components	Japan	April 4, 2022
	Taiwan	April 3, 2022

(*) Patent is licensed from the patent holder or co-owner on a non-exclusive basis.

To the best of our knowledge, there are no pending lawsuits against us regarding infringement of any existing patents or other intellectual property rights or any unresolved claims made by third parties that we are infringing the intellectual property rights of such third parties.

SALES AND MARKETING

Because of the highly technical nature of our products, we market our products primarily by direct customer contact through our sales personnel, and through a network of domestic and international independent sales representatives and distributors that specialize in semiconductor equipment and supplies. Our promotional activities include direct sales contacts, participation in trade shows, an internet website, advertising in trade magazines and the distribution of product brochures.

In order to increase sales and improve customer service globally, we intend to integrate our Bruce Technologies and Tempress sales and marketing teams and transition them from being product oriented to regionally focused. Additionally, we intend to hire additional senior management to expand our existing solar sales and marketing efforts.

Sales to distributors of both segments are generally on terms comparable to sales to end user customers, as our distributors generally quote their customers after first obtaining a quote from us and have an order from the end-user before placing an order with us. Our sales to distributors are not contingent on their future sales and do not include a general right of return. Historically, returns have been rare. Distributors of our semiconductor equipment segment products do not stock a significant amount of our products, as the inventory they do hold is primarily limited to parts needed to provide timely repairs to the customer.

Payment terms of our parts, service and retrofit sales, which usually comprise approximately 50-60% of consolidated net revenue, are generally net 30 days, F.O.B. shipping point or equivalent terms. The payment terms of equipment or systems sales vary depending on the size of the order and the size, reputation and creditworthiness of the customer. As a result, the financial terms of equipment sales can range from 80% due 30 days after shipment and 20% due 30 days after acceptance, to requiring a 30% customer deposit 30 days after order placement, 60% due 30 days after shipment and 10% net due 30 days after acceptance. Letters of credit are required of certain customers depending on the size of the order, creditworthiness of the customer and its country of domicile.

During fiscal 2006, 65% of our net revenue came from customers outside of North America. In the nine months ended June 30, 2007, net revenue was distributed among customers in different geographic regions as follows: North America 29% (all of which is in the United States), Asia 48% (including 17% to China and 19% to Taiwan) and Europe 23%. During the nine months ended June 30, 2007, two customers accounted for approximately 12% and 10% of our net revenue, respectively. One customer represented approximately 17% of net revenue in fiscal 2006. No customer represented greater than 10% of net revenue during fiscal 2005. One customer represented approximately 10% of net revenue during fiscal 2004. Our largest customer has been different in each of the last three fiscal years.

Our business is not seasonal in nature, but is cyclical based on the capital equipment investment patterns of solar cell and semiconductor manufacturers. These expenditure patterns are based on many factors, including anticipated demand for integrated circuits, the development of new technologies and global and regional economic conditions.

COMPETITION

We compete in several distinct markets including semiconductor devices, semiconductor wafer, solar cell, MEMS and the market for general industrial lapping and polishing machines and supplies. Each of these markets is highly competitive. Our ability to compete depends on our ability to continually improve our products, processes and services, as well as our ability to develop new products that meet constantly evolving customer requirements. Significant competitive factors for succeeding in the semiconductor manufacturing equipment market include the equipment's technical capability, productivity and cost-effectiveness, overall reliability, ease of use and maintenance, contamination and defect control and the level of technical service and support provided by the vendor. The importance of each of these factors varies depending on the specific customer's needs and criteria, including considerations such as the customer's process application, product requirements, timing of the purchase and particular circumstances of the purchasing decision.

The Semiconductor Devices, Semiconductor Wafer, Solar Cell and MEMS Markets. We believe our large installed base of horizontal diffusion furnaces provides a competitive advantage. We have sold and installed over 900 horizontal furnaces worldwide and, in our experience, our large installed customer base has led to significant replacement and expansion demand. Customers that have purchased our furnaces can leverage their investment in training, spare parts inventory and other costs by acquiring additional equipment from us.

Our diffusion furnaces and automation processing equipment primarily compete with those produced by other domestic and foreign original equipment manufacturers, some of which are well-established firms that are much larger and have substantially greater financial resources than us. Some of our competitors have a diversified product line, making it difficult to quantify their sales of products that compete directly with our products. Competitors of our horizontal diffusion furnaces include Centrotherm GmbH, Koyo Systems Co. Ltd., MRL Industries, Inc., a

subsidiary of Sandvik AB, CVD Equipment, Inc., Semco Engineering S.A., Expertech, Inc. and Tystar Corporation. Competitors of our lapping and polishing machines and supplies include Lapmaster International, LLC, Hamai Co., Ltd., Speedfam Co., Ltd., Onse, Inc. and Eminess Technologies, Inc. Such competition could intensify in the future, if the industry trend to produce smaller chips on larger wafers accelerates, or the newer technology represented by vertical furnaces results in a material shift in the purchasing habits of our targeted customers. Our furnaces and lapping and polishing machines also face, to a limited, but increasing extent, competition from used equipment on the low-end of the price spectrum.

We intend to maintain or improve our competitive position for orders for our diffusion furnaces and automation products by leveraging our established brands. We also intend to expand our sales to the solar industry by focusing our sales and marketing efforts on the very large and stable middle semiconductor market, designing products to meet the customer's specific process requirements and providing competitive prices and product support service levels. With the addition of the Bruce Technologies product line we gained marketing synergies and believe we are more competitive at the upper end of our targeted market. We make purchases of our own brands of used diffusion furnaces at opportunistic prices, refurbish them, and then resell them with the original manufacturer's warranty in an effort to better defend the lower end of our targeted market.

We believe our semiconductor automation products compete favorably with those of our primary competitors, which include Mactronics and Koyo Thermo Systems Co. Ltd. In this market, we believe that our S-300 and E-300 automation products require less of the expensive clean room floor space and are generally less expensive and easier to operate than those of our competitors. We believe that patents on the key features of our semiconductor automation products provide us with a competitive advantage. We expect our semiconductor automation product competitors to seek to continually improve the design and performance of their products, and we can make no assurance that our semiconductor automation competitors will not develop enhancements or acquire new technologies that will offer price or performance features superior to those that we offer. Our semiconductor automation products are designed to target customers who want to improve employee safety and reduce scrap. The acquisition of the Bruce Technologies product line has provided increased sales opportunities and new customers for our semiconductor automation products through introductions to the installed based of the users of the Bruce Technologies line of furnaces.

Despite competition from existing manufacturing products, we believe that our Atmoscan products provide better results in terms of more uniform wafer temperature and dispersion of heated gases in the semiconductor manufacturing process, less exposure of semiconductor wafers to contaminants and other technical advantages, all of which afford a higher yield to its users. However, vertical furnaces provide the same benefits as our Atmoscan product to manufacturers that can justify the higher price.

We have provided automation solutions to the semiconductor industry since 1989 and more recently to the solar industry. We use a vacuum technology for our solar wafer transfer systems designed to ensure high throughput, which we believe provides us with a significant point of differentiation from our