FORM S-1 · REGISTRATION STATEMENT

MKS Inc

IPO priced 1999-03-30 · $14.00 a share · MKSI



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AS FILED WITH THE SECURITIES AND EXCHANGE COMMISSION ON NOVEMBER 14, 1997

REGISTRATION NO. 333-

SECURITIES AND EXCHANGE COMMISSION WASHINGTON, D.C. 20549

FORM S-1 REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933

MKS INSTRUMENTS, INC. (EXACT NAME OF REGISTRANT AS SPECIFIED IN ITS CHARTER)

MASSACHUSETTS	3823	04-2277512
(State or other jurisdiction of incorporation or organization)	(Primary Standard Industrial Classification Code Number)	(I.R.S. Employer Identification Number)

SIX SHATTUCK ROAD ANDOVER, MA 01810 (978) 975-2350 (ADDRESS, INCLUDING ZIP CODE, AND TELEPHONE NUMBER, INCLUDING AREA CODE, OF REGISTRANT'S PRINCIPAL EXECUTIVE OFFICES) JOHN R. BERTUCCI CHAIRMAN, PRESIDENT AND CHIEF EXECUTIVE OFFICER MKS INSTRUMENTS, INC. SIX SHATTUCK ROAD ANDOVER, MA 01810 (978) 975-2350 (NAME, ADDRESS, INCLUDING ZIP CODE, AND TELEPHONE NUMBER, INCLUDING AREA CODE, OF AGENT FOR SERVICE)

COPIES TO:

MARK G. BORDEN, ESQ.
HALE AND DORR LLP
60 State Street
Boston, Massachusetts 02109
(617) 526-6000

DAVID C. CHAPIN, ESQ.
ROPES & GRAY
One International Place
Boston, Massachusetts 02110
(617) 951-7000

APPROXIMATE DATE OF COMMENCEMENT OF PROPOSED SALE TO THE PUBLIC:

AS SOON AS PRACTICABLE AFTER THE EFFECTIVE DATE HEREOF.

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. [ ] IF THIS FORM IS FILED TO REGISTER ADDITIONAL SECURITIES FOR AN OFFERING PURSUANT TO RULE 462(B) 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. [ ] 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. [ ] 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. [ ] IF DELIVERY OF THE PROSPECTUS IS EXPECTED TO BE MADE PURSUANT TO RULE 434, PLEASE CHECK THE FOLLOWING BOX: [ ]

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
COMMON STOCK, NO PAR VALUE PER SHARE....	4,600,000 SHARES	$15.00	$69,000,000	$20,909.10

(1) INCLUDES 600,000 SHARES WHICH THE UNDERWRITERS HAVE THE OPTION TO PURCHASE FROM THE COMPANY TO COVER OVER-ALLOTMENTS, IF ANY. SEE "UNDERWRITING." (2) ESTIMATED SOLELY FOR THE PURPOSE OF CALCULATING THE AMOUNT OF THE REGISTRATION FEE PURSUANT TO RULE 457(A) UNDER THE SECURITIES ACT OF 1933.

THE REGISTRANT HEREBY AMENDS THIS REGISTRATION STATEMENT ON SUCH DATE OR DATES AS MAY BE NECESSARY TO DELAY ITS EFFECTIVE DATE UNTIL THE REGISTRANT SHALL FILE A FURTHER AMENDMENT WHICH SPECIFICALLY STATES THAT THIS REGISTRATION STATEMENT SHALL THEREAFTER

BECOME EFFECTIVE IN ACCORDANCE WITH SECTION 8(A) OF THE SECURITIES ACT OF 1933 OR UNTIL THE REGISTRATION STATEMENT SHALL BECOME EFFECTIVE ON SUCH DATE AS THE COMMISSION, ACTING PURSUANT TO SECTION 8(A), MAY DETERMINE.

INFORMATION CONTAINED HEREIN IS SUBJECT TO COMPLETION OR AMENDMENT. A REGISTRATION STATEMENT RELATING TO THESE SECURITIES HAS BEEN FILED WITH THE SECURITIES AND EXCHANGE COMMISSION. THESE SECURITIES MAY NOT BE SOLD NOR MAY OFFERS TO BUY BE ACCEPTED PRIOR TO THE TIME THE REGISTRATION STATEMENT BECOMES EFFECTIVE. THIS PROSPECTUS SHALL NOT CONSTITUTE AN OFFER TO SELL OR THE SOLICITATION OF AN OFFER TO BUY NOR SHALL THERE BE ANY SALE OF THESE SECURITIES IN ANY STATE IN WHICH SUCH OFFER, SOLICITATION OR SALE WOULD BE UNLAWFUL PRIOR TO REGISTRATION OR QUALIFICATION UNDER THE SECURITIES LAWS OF ANY SUCH STATE.

SUBJECT TO COMPLETION, DATED NOVEMBER , 1997

4,000,000 SHARES

[LOGO] MKS INSTRUMENTS

COMMON STOCK

ALL OF THE 4,000,000 SHARES OF COMMON STOCK OFFERED HEREBY ARE BEING SOLD BY THE COMPANY. PRIOR TO THIS OFFERING, THERE HAS BEEN NO PUBLIC MARKET FOR THE COMMON STOCK OF THE COMPANY. IT IS CURRENTLY ESTIMATED THAT THE INITIAL PUBLIC OFFERING PRICE PER SHARE WILL BE BETWEEN $ AND $. SEE "UNDERWRITING" FOR A DISCUSSION OF FACTORS TO BE CONSIDERED IN DETERMINING THE INITIAL PUBLIC OFFERING PRICE.

APPLICATION HAS BEEN MADE FOR QUOTATION OF THE COMMON STOCK ON THE NASDAQ NATIONAL MARKET UNDER THE SYMBOL "MKSI."

SEE "RISK FACTORS" COMMENCING ON PAGE 5 FOR CERTAIN FACTORS THAT SHOULD BE CONSIDERED BY PROSPECTIVE PURCHASERS OF THE COMMON STOCK OFFERED HEREBY.

THESE SECURITIES HAVE NOT BEEN APPROVED OR DISAPPROVED BY THE SECURITIES AND EXCHANGE COMMISSION OR ANY STATE SECURITIES COMMISSION NOR HAS THE SECURITIES AND EXCHANGE COMMISSION OR ANY STATE SECURITIES COMMISSION PASSED UPON THE ACCURACY OR ADEQUACY OF THIS PROSPECTUS. ANY REPRESENTATION TO THE CONTRARY IS A CRIMINAL OFFENSE.

	Price to Public	Underwriting Discount(1)	Proceeds to Company(2)
Per Share.....	$	$	$
Total(3).....	$	$	$

(1) SEE "UNDERWRITING" FOR INFORMATION CONCERNING INDEMNIFICATION OF THE UNDERWRITERS AND OTHER MATTERS. (2) BEFORE DEDUCTING ESTIMATED EXPENSES PAYABLE BY THE COMPANY, ESTIMATED AT $. (3) THE COMPANY HAS GRANTED TO THE UNDERWRITERS A 30-DAY OPTION TO PURCHASE UP TO 600,000 ADDITIONAL SHARES OF COMMON STOCK SOLELY TO COVER OVER-ALLOTMENTS, IF ANY. IF THE UNDERWRITERS EXERCISE THIS OPTION IN FULL, THE PRICE TO PUBLIC WILL TOTAL $, THE UNDERWRITING DISCOUNT WILL TOTAL $ AND THE PROCEEDS TO THE COMPANY WILL TOTAL $. SEE "UNDERWRITING."

THE SHARES OF COMMON STOCK ARE OFFERED BY THE SEVERAL UNDERWRITERS NAMED HEREIN, SUBJECT TO RECEIPT AND ACCEPTANCE BY THEM AND SUBJECT TO THEIR RIGHT TO REJECT ANY ORDER IN WHOLE OR IN PART. IT IS EXPECTED THAT CERTIFICATES REPRESENTING SUCH SHARES WILL BE MADE AGAINST PAYMENT THEREFOR AT THE OFFICES OF NATIONSBANC MONTGOMERY SECURITIES, INC. ON OR ABOUT , 1998.

NATIONSBANC MONTGOMERY SECURITIES, INC.

DONALDSON, LUFKIN & JENRETTE

SECURITIES CORPORATION PAINEWEBBER INCORPORATED

, 1998.

MKS INSTRUMENTS, INC. PROSPECTUS COVER NOVEMBER 14, 1997

INSIDE FRONT COVER (PG. 2):

THIS PAGE IS PRODUCED IN FOUR-COLOR PROCESS. AMIDST A DARK BACKGROUND, THE MKS LOGO APPEARS AT THE TOP OF THE PAGE, AND UNDERNEATH IS THE PHRASE "A WIDE RANGE OF PRODUCTS MADE USING MKS PROCESS CONTROL INSTRUMENTS." TWO PARAGRAPHS DESCRIBING THE ROLE MKS PLAYS IN COMPLEX ADVANCED MATERIALS MANUFACTURING PROCESSES, SUCH AS SEMICONDUCTOR, ALSO APPEAR ON THIS PAGE, AND ARE AS FOLLOWS:

(FIRST PARAGRAPH) "MKS SURROUNDS THE PROCESS. IN SEMICONDUCTOR AND OTHER INDUSTRIES INVOLVING ADVANCED MATERIALS PROCESSING, PRODUCTS SUCH AS SEMICONDUCTOR DEVICES, CD ROMS, FLAT PANEL DISPLAYS, AND FIBER OPTIC CABLES ARE THE RESULT OF COMPLEX MANUFACTURING PROCESSES. THESE PROCESSES BUILD UP VERY THIN LAYERS OF MATERIALS, STEP BY STEP, THROUGH THE INTERACTION OF SPECIFIC GASES AND MATERIALS INSIDE TIGHTLY CONTROLLED PROCESS CHAMBERS. MAINTAINING CONTROL OF THESE COMPLEX STEPS THROUGHOUT THE ENTIRE MANUFACTURING PROCESS IS CRITICAL TO PERFORMANCE AND YIELD. (SECOND PARAGRAPH) MKS PROCESS CONTROL INSTRUMENTS ARE INTEGRATED INTO ALMOST EVERY STEP OF GAS-RELATED PROCESSES--MANAGING THE FLOW RATES OF GASES ENTERING AND EXITING THE PROCESS CHAMBER, CONTROLLING THE GAS COMPOSITION AND PRESSURE INSIDE THE CHAMBER, ANALYZING AND MONITORING THE COMPOSITION OF THE GASES, AND ISOLATING THE GASES FROM THE OUTSIDE ENVIRONMENT."

IN THE CENTER OF THE PAGE IS A PHOTO MONTAGE, DISPLAYING IMAGES OF SEMICONDUCTOR DEVICES, FLAT PANEL DISPLAYS, MAGNETIC AND OPTICAL STORAGE MEDIA, FIBEROPTIC CABLES, SOLAR PANELS, AND GAS LASERS. EACH OF THESE IMAGES HAS A TEXT LABEL ADJACENT TO IT.

INSIDE SPREAD (PGS. 3 AND 4):

THESE PAGES ARE PRODUCED IN FOUR-COLOR PROCESS. THE MAIN FOCUS OF THE SPREAD IS THE ILLUSTRATION OF A TYPICAL PROCESS CHAMBER, WITH NUMEROUS MKS PRODUCTS SURROUNDING THE CHAMBER. AT THE TOP OF THE ILLUSTRATION, CENTERED ACROSS THE TWO PAGES, IS THE TITLE "MKS INSTRUMENTS...SURROUNDING THE PROCESS." EACH PRODUCT IS DESCRIBED IN A BRIEF PARAGRAPH, AND THE PARAGRAPHS APPEAR ON BOTH SIDES OF THE ILLUSTRATION--LEFT AND RIGHT COLUMNS. THE PARAGRAPHS ARE AS FOLLOWS:

DIRECT LIQUID INJECTION SUBSYSTEMS FOR USE IN THE DELIVERY OF A WIDE VARIETY OF NEW MATERIALS TO THE PROCESS CHAMBER THAT CANNOT BE DELIVERED USING CONVENTIONAL THERMAL-BASED MASS FLOW CONTROLLERS.

AUTOMATIC PRESSURE CONTROLLERS WITH INTEGRATED BARATRON(R) PRESSURE TRANSDUCERS A COMPACT, INTEGRATED MEASUREMENT AND CONTROL PACKAGE FOR USE IN CONTROLLING UPSTREAM OR DOWNSTREAM PROCESS CHAMBER PRESSURE.

ULTRACLEAN MINI-BARATRON(R) PRESSURE TRANSDUCERS FOR USE IN GAS CABINETS TO FEED ULTRA-PURE GASES TO CRITICAL PROCESS SYSTEMS.

ULTRACLEAN MASS FLOW CONTROLLERS FOR THE PRECISE MEASUREMENT AND CONTROL OF MASS FLOW RATES OF INERT OR CORROSIVE GASES AND VAPORS INTO THE PROCESS CHAMBER.

IN SITU FLOW VERIFIERS FOR FAST VERIFICATION OF MASS FLOW CONTROLLER ACCURACY AND REPEATABILITY DURING A PROCESS.

PRESSURE CONTROL VALVES TO PRECISELY CONTROL THE FLOW OF GASES TO A PROCESS CHAMBER IN A WIDE RANGE OF FLOW RATES.

DIGITAL COLD CATHODE IONIZATION AND CONVECTION VACUUM GAUGES A VARIETY OF INDIRECT PRESSURE GAUGES FOR MEASURING VERY LOW CHAMBER PRESSURES AND CONVEYING INFORMATION DIGITALLY TO HOST COMPUTERS.

HEATED PUMPING LINES FOR THE REDUCTION OF CONTAMINANTS IN THE VACUUM PUMP AND PUMP EXHAUST STREAM.

ORION(R) PROCESS MONITORS AND RESIDUAL GAS ANALYZERS FOR THE ANALYSIS OF THE COMPOSITION OF BACKGROUND AND PROCESS GASES INSIDE A PROCESS CHAMBER.

PRESSURE SWITCHES PROVIDE PROTECTION OF VACUUM EQUIPMENT AND PROCESSES BY SIGNALING WHEN ATMOSPHERIC PRESSURE HAS BEEN REACHED.

IN SITU DIAGNOSTICS ACCESS VALVE ALLOWS FOR ACCURATE CALIBRATION AND DIAGNOSTICS OF VACUUM GAUGES AND PRESSURE TRANSDUCERS WHILE DIRECTLY MOUNTED ON THE PROCESS CHAMBER.

BARATRON(R) PRESSURE MEASURING INSTRUMENTS FOR THE ACCURATE MEASUREMENT AND CONTROL OF A WIDE RANGE OF PROCESS PRESSURES.

EXHAUST THROTTLE VALVES AND AUTOMATIC PRESSURE CONTROLLERS FOR ISOLATION AND DOWNSTREAM CONTROL OF PROCESS CHAMBER PRESSURES, AND PRESSURE CONTROL WITHIN THE EXHAUST SYSTEMS.

HIGH VACUUM VALVES TO ISOLATE THE PROCESS CHAMBER FROM BOTH THE PUMPS AND FROM ATMOSPHERE.

VAPOR SUBLIMATION TRAP TO COLLECT BY-PRODUCTS AND PARTICULATES THAT COULD OTHERWISE CONTAMINATE DEVICES IN THE PROCESS CHAMBERS AND DAMAGE VACUUM PUMPS. LINES ARE DRAWN FROM EACH PARAGRAPH SECTION TO ITS CORRESPONDING PART ON THE ILLUSTRATION. THE MKS LOGO APPEARS IN COLOR ABOVE THE LEFT COLUMN OF TEXT. UNDERNEATH THE ILLUSTRATION AT THE BOTTOM OF THE PAGE SPREAD IS A SENTENCE THAT READS AS FOLLOWS: 'THE ABOVE GRAPHIC DEPICTS A TYPICAL PROCESS CHAMBER AND SURROUNDING EQUIPMENT USED IN SEMICONDUCTOR MANUFACTURING.' AT THE BOTTOM OF THE RIGHT COLUMN (ON PG. 4) IS A SENTENCE IN SMALLER TYPE THAT READS: 'PRICES OF PRODUCTS SHOWN ABOVE RANGE FROM $400 TO $80,000.'

[PICTURES]

MKS, MKS INSTRUMENTS, BARATRON AND ORION ARE TRADEMARKS OF THE COMPANY. THIS PROSPECTUS CONTAINS TRADE MARKS, SERVICE MARKS AND TRADE NAMES OF COMPANIES AND ORGANIZATIONS OTHER THAN MKS.

CERTAIN PERSONS PARTICIPATING IN THIS OFFERING MAY ENGAGE IN TRANSACTIONS THAT STABILIZE, MAINTAIN OR OTHERWISE AFFECT THE PRICE OF THE COMMON STOCK OFFERED HEREBY, INCLUDING THE ENTRY OF STABILIZING BIDS, SYNDICATE COVERING TRANSACTIONS OR THE IMPOSITION OF PENALTY BIDS. FOR A DESCRIPTION OF THESE ACTIVITIES, SEE "UNDERWRITING."

Prospectus Summary

The following summary is qualified in its entirety by the more detailed information, including "Risk Factors" and the Consolidated Financial Statements and the Notes thereto appearing elsewhere in this Prospectus. Except as otherwise noted herein, all information in this Prospectus (i) gives effect to a 2,110-for-1 stock split, to be effected prior to the closing of this offering, of each share of Class A Common Stock and Class B Common Stock of the Company and the conversion of such shares upon the closing of this offering into an aggregate of 12,035,440 shares of Common Stock of the Company (the "Recapitalization") and (ii) assumes no exercise of the Underwriters' over-allotment option. See "Description of Capital Stock," "Underwriting" and Note 2 of Notes to Consolidated Financial Statements.

The Company

MKS Instruments, Inc. ("MKS" or the "Company") is a leading worldwide supplier of instruments and components used to measure, control, analyze and isolate gases in semiconductor and other manufacturing processes. The Company offers a comprehensive line of products which are used around the process chamber in both semiconductor front-end manufacturing processes and other advanced thin-film and vacuum-based processes used in the manufacture of, among other things, flat

panel displays, magnetic and optical storage media, solar cells, fiber optic cables and gas lasers. The Company's products include: (i) pressure and flow measurement and control instruments; (ii) vacuum gauges, valves and components; and (iii) gas analysis instruments.

The trend toward semiconductor devices with smaller geometries and enhanced functionality has resulted in higher value per wafer and more complex manufacturing processes. This has led to the need for increasingly sophisticated semiconductor manufacturing equipment, a heightened emphasis on uptime, yield and throughput, and the need for more precise process controls. As a result, the design and performance of instruments that control pressure or the flow of gases, or analyze the mixture of gases, are becoming even more critical to the semiconductor manufacturing process. In addition, the number and diversity of components and subassemblies used in the manufacturing process has grown as the number and complexity of process steps and sophistication of process equipment has increased. These trends in the semiconductor industry have led semiconductor equipment manufacturers to seek to establish relationships with a smaller group of suppliers that provide broad and integrated product lines, worldwide sales and support and advanced technological capabilities for critical process technology areas.

The Company believes that it offers the widest range of pressure and vacuum measurement and control products serving the semiconductor industry. The Company's objective is to be the leading worldwide supplier of instruments and components used to measure, control, analyze and isolate gases in semiconductor and other advanced thin-film processing applications. The Company's strategies to accomplish this objective include extending its technology leadership, providing a comprehensive product line, building upon its close customer relationships in the semiconductor industry, expanding the application of its existing technologies to related markets and leveraging its global infrastructure.

For over 20 years the Company has been focused on serving the needs of semiconductor device manufacturers and semiconductor equipment OEMs and has established long-term relationships with many of its customers. The Company has over 4,000 customers worldwide including most major semiconductor equipment OEMs, semiconductor device manufacturers, a broad range of industrial companies and university, government and industrial research laboratories. The Company's customers in its principal market, the semiconductor market, include Applied Materials, Eaton, Hitachi, Lam Research, Tokyo Electron, Ltd. ("TEL") and ULVAC. The Company sells its products primarily through its direct sales force in 22 offices in Canada, France, Germany, Japan, Korea, the Netherlands, the United Kingdom and the United States.

MKS Instruments, Inc. is a Massachusetts corporation organized in June 1961. The Company's principal executive offices are located at Six Shattuck Road, Andover, MA 01810, and its telephone number is (978)975-2350.

The Offering

Common Stock offered by the Company.....	4,000,000 shares
Common Stock to be outstanding after the offering.....	16,035,440 shares(1)
Use of proceeds.....	For distributions to current stockholders

	and general corporate purposes.
Proposed Nasdaq National Market symbol.....	MKSI

(1) Based on shares of Common Stock outstanding as of September 30, 1997. Excludes (i) 1,042,361 shares of Common Stock issuable upon exercise of stock options outstanding as of such date at an exercise price of $6.64 per share and (ii) 1,978,139 additional shares reserved for future grants or issuances under the Company's stock option and stock purchase plans.

Summary Consolidated Financial Data (In Thousands, Except Per Share Data)

	NINE MONTHS ENDED	YEAR ENDED DECEMBER 31,				SEPTEMBER 30,	
	1992	1993	1994	1995	1996	1996	1997
STATEMENT OF INCOME DATA:							
Net sales.....	$73,260	$80,852	$106,829	$157,164	$170,862	$136,097	$134,629
Gross profit.....	30,628	34,068	47,016	69,461	68,854	55,019	56,173
Income from operations.....	4,593	6,365	12,087	24,106	16,068	12,990	15,088
Net income.....	$ 2,646	$ 4,351	$ 10,003	$ 21,658	$ 12,503	$ 10,291	$ 12,892
PRO FORMA STATEMENT OF INCOME DATA:							
Pro forma net income(1).....					$ 8,248	$ 8,731	
Pro forma net income per share(2).....					$ 0.59	$ 0.62	
Pro forma weighted average common shares outstanding(2).....					13,994	14,134	

	SEPTEMBER 30, 1997		
	ACTUAL	PRO FORMA(3)	AS ADJUSTED(3)(4)
BALANCE SHEET DATA:			
Working capital.....	$ 29,479	$ (704)	
Total assets.....	106,685	106,685	
Short-term obligations.....	16,372	16,372	
Long-term obligations, less current portion.....	16,348	16,348	
Stockholders' equity.....	51,756	21,573	

(1) Effective July 1, 1987, the Company elected to be treated as an S corporation. As an S corporation, the Company has not been subject to federal, and certain state, income taxes. The pro forma net income reflects the provision for income taxes that would have been recorded had the Company been a C corporation, assuming an effective tax rate of 38.0%. As a result of terminating its S corporation status upon the closing of this offering, the Company will record a one-time non-cash credit to historical earnings for additional deferred taxes. If this credit to earnings had occurred at September

30, 1997, the amount would have been approximately $2.8 million. This amount is expected to change through the closing of this offering and is excluded from pro forma net income. See Notes 2 and 9 of Notes to Consolidated Financial Statements.

(2) In accordance with a regulation of the Securities and Exchange Commission, the pro forma net income per share and weighted average common shares outstanding reflect the effect of an assumed issuance of sufficient shares to fund the S Corporation Distribution, as of January 1, 1997, to be made out of the proceeds of this offering. See "S Corporation and Termination of S Corporation Status" and Note 2 of Notes to Consolidated Financial Statements.

(3) Pro forma balance sheet data reflects the distribution of an estimated $30.2 million, calculated as of September 30, 1997, of cumulative undistributed S corporation taxable income for which stockholders of record prior to the closing of this offering have been or will be taxed. The actual amount to be distributed is expected to increase based upon taxable earnings for the period October 1, 1997 through the closing of the offering, subject to certain limitations. See "S Corporation and Termination of S Corporation Status."

(4) Adjusted to reflect the sale of 4,000,000 shares of Common Stock at an assumed initial public offering price of $ per share, after deducting the estimated underwriting discount and offering expenses payable by the Company.

Risk Factors

In addition to the other information in this Prospectus, prospective purchasers of the Common Stock offered hereby should consider carefully the following factors in evaluating the Company and its business.

Cyclicality of the Semiconductor Industry

For the past three years and the first nine months of 1997, the Company estimates that approximately two-thirds of the Company's sales were to semiconductor equipment OEMs and semiconductor device manufacturers and the Company expects that sales to such customers will continue to account for a substantial majority of its sales. The Company's business depends substantially upon the capital expenditures of semiconductor device manufacturers, which in turn depend upon the demand for semiconductors and other products utilizing semiconductors. Historically, the semiconductor market has been highly cyclical and has experienced periods of overcapacity, resulting in significantly reduced demand for capital equipment. In 1996, the semiconductor industry experienced a significant decline, which caused a number of the Company's customers to reduce their orders from the Company. Although there have been indications that the semiconductor and semiconductor equipment industries have begun to recover from the 1996 downturn, there can be no assurance that such industries will continue to improve or that there will not be further downturns or slowdowns in any of the markets that the Company serves. More recently, the financial markets in Asia, one of the Company's principal

international markets, have experienced significant turmoil. There can be no assurance that such turmoil in the financial markets will not negatively impact the growth of the semiconductor industry in the region. Also, the requirement that the Company continue to invest in research and development, marketing and customer support will constrain the Company's ability to reduce expenses in response to any such downturn or slowdown. In addition, the Company's future sales will depend in part on the sale of products for new large fabrication facilities that are either planned or under construction and there can be no assurance that such fabrication facilities will be completed or, if completed, will operate at full capacity. Any reduction in orders resulting from a downturn or slowdown in the semiconductor industry, together with the Company's inability to quickly adjust expenses, would have a material adverse impact on the Company's revenues, financial condition and results of operations.

Fluctuations in Operating Results

The Company has experienced and expects to continue to experience significant fluctuations in its quarterly and annual operating results. A substantial and increasing proportion of the Company's shipments are made on a just-in-time basis in which the shipment of products occurs shortly after an order is received. Due to the short time between receipt of orders and shipments, the Company operates with a low level of backlog. Moreover, this backlog at any point in time is not sufficient to meet the Company's revenue expectations for a particular quarter. As a consequence of the just-in-time basis of the Company's shipments and the low level of backlog, a decrease in demand for the Company's products from one or more customers could occur with limited advanced notice and could have an adverse effect on the Company's results of operations in a particular period. The Company's revenues and operating results are also affected by a variety of other factors, including specific economic conditions in the industries in which the Company's customers operate, particularly the semiconductor industry; the timing of the receipt of orders from major customers; customer cancellations or shipment delays; price competition; disruption in sources of supply; seasonal variations of capital spending by customers; production capacity constraints; specific features requested by customers; exchange rate fluctuations; the introduction or announcement of new products by the Company or its competitors; and other factors, many of which are beyond the Company's control.

The Company's results of operations for a particular period would be adversely affected if an anticipated significant order were not received in time to permit shipment during that period, as a significant portion of the Company's operating expenses are fixed in nature and planned expenditures are based in part on anticipated orders. In addition, the need for continued expenditures for research and development would make it difficult to reduce expenses in a particular period if the Company's sales goals for that period were not met. The inability to adjust spending quickly enough to compensate for any revenue shortfall would magnify the adverse impact of such revenue shortfall on the Company's results of operations. For example, the Company was in the process of increasing its production capacity when the semiconductor capital equipment market began to experience a significant downturn in 1996. This downturn had a material adverse effect on the Company's operating results in

the second half of 1996 and the first half of 1997. As a result of the factors discussed above, it is likely that the Company will in the future experience quarterly or annual fluctuations and that, in one or more future quarters, the Company's operating results will fall below the expectations of public market analysts or investors. In any such event, the price of the Company's common stock could decline significantly.

Customer Concentration

While the Company sold products to more than 4,000 customers in 1996, the Company's five largest customers in 1994, 1995 and 1996 accounted for approximately 18%, 24% and 26%, respectively, of the Company's net sales. During the first nine months of 1997, the five largest customers accounted for approximately 31% of the Company's net sales, and one customer, Applied Materials, accounted for approximately 21% of the Company's net sales. While the Company has entered into a purchase contract with Applied Materials that expires in 2002, no significant customer of the Company, including Applied Materials, has entered into an agreement requiring it to purchase any minimum quantity of the Company's products. The demand for the Company's products from its customers depends in part on orders received by such customers from their own semiconductor device manufacturer customers.

The Company sells its products primarily to semiconductor equipment OEMs and, to a lesser extent, semiconductor device manufacturers. The number of the Company's potential customers in its primary market is limited. The loss of a major customer or any reduction in orders by such customers, including reductions due to market or competitive conditions, would likely have a material adverse effect on the Company's business and results of operations. Attempts to mitigate the adverse impact of any such loss or reduction through the rapid addition of new customers could be difficult because prospective customers typically require lengthy qualification periods prior to placing volume orders with a new supplier. The Company's future success will continue to depend upon its ability to maintain its relationships with its existing key customers and to attract new customers, as well as the success of the Company's OEM customers in creating demand for their capital equipment products incorporating the Company's products.

Competition

The market for the Company's products is highly competitive. The Company encounters substantial competition in each of its product lines from a number of competitors, although no one competitor competes with the Company across all product lines. Certain of the Company's competitors have greater financial and other resources than the Company. Other competitors are smaller than the Company but well established in specific product niches. In some cases, particularly with respect to mass flow controllers, end-user semiconductor device manufacturers may direct semiconductor equipment OEMs to use a specified supplier's product in their equipment. Accordingly, for such products, the Company's success will depend in part on its ability to have semiconductor device

manufacturers specify that its products be used at their fabrication facilities and the Company may encounter difficulties in changing established relationships of competitors with a large installed base of products at such customers' fabrication facilities. There can be no assurance that competitors will not develop products that offer price or performance features superior to those of the Company's products. To the extent that the Company's products do not achieve performance or other advantages over products offered by competitors, the Company is likely to experience greater price competition or loss of market share with respect to such products. Also, certain of the Company's customers may develop in-house products that serve the functions of and replace the Company's products. The Company believes that the worldwide competitive pressures in the Company's markets could result in a decline in the prices of its products in the future. Declines in the selling prices of the Company's products, if not offset by reductions in the cost of producing such products and increased unit volume sales or by sales of products with higher gross margins, could have a material adverse effect on the Company's business and results of operations.

Technological Changes

The semiconductor equipment industry is subject to rapid technological change and new product introductions and enhancements. The Company's success depends in part upon its ability to develop enhanced and new products that keep pace with technological developments, achieve market acceptance and respond to evolving customer requirements. New product introductions may contribute to fluctuations in quarterly operating results, as customers may defer ordering products from the Company's existing product lines or may purchase products from competitors. Any new product reliability or quality problems could result in reduced orders, higher manufacturing costs and additional service and warranty expense. Responding to rapid technological change and the need to develop and introduce new products to meet customers' needs and evolving industry standards will require the Company to make substantial investments in research and product development. Any failure by the Company to anticipate or respond adequately to technological developments and customer requirements or any significant delays in product development or introduction could result in a loss of competitiveness and could materially adversely affect the Company's operating results. There can be no assurance that the Company will successfully develop and manufacture new products or that any product enhancements or new products developed by the Company will gain market acceptance.

The semiconductor device manufacturing industry is currently undergoing an evolution from 200mm to 300mm wafers and from .35 micron to .25 and .18 micron line-widths. Device manufacturers are beginning to establish pilot production lines and specifications for the use of 300mm wafers and the production of .25 and .18 micron devices. The Company has developed, and is developing, new products and product enhancements to address the expected increasing demand for equipment capable of handling these new wafer sizes and line-widths. There can be no assurance that the Company will be able to develop these new products and enhancements successfully or in time to meet emerging demand or that the new products and enhancements developed by the Company will be

accepted by the Company's customers. Failure by the Company to develop such products or enhancements in a timely manner would have a material adverse effect on the Company's business, financial condition and results of operations.

Expansion Into New Markets

The Company plans to build upon its experience in manufacturing and selling gas management products used by the semiconductor industry by designing and selling gas management products for applications in other industries which use production processes similar to those used in the semiconductor industry. The Company's future success will depend in part on its ability to identify new applications for its products, adapt its products for such applications and then market and sell such products to customers. The Company has limited experience selling its products in certain markets outside the semiconductor industry. There can be no assurance that the Company will be successful in further expanding its business outside the semiconductor industry. Any failure to penetrate additional markets would limit the Company's ability to reduce its vulnerability to downturns in the semiconductor industry and could have a material adverse effect upon its business and results of operations.

Expansion of Manufacturing Capacity

The Company plans in 1998 to add manufacturing facilities to its Austin, Texas and United Kingdom operations and further equip its cleanroom facilities in Andover and Methuen, Massachusetts. The Company's ability to continue to increase sales of certain of its products depends in part upon its ability to expand its manufacturing capacity for such products in a timely manner. If the Company is unable to expand its manufacturing capacity on a timely basis or to manage such expansion effectively, the Company's rate of growth and market share could be reduced and its business and results of operations could be adversely affected. The Company's market share and results of operations could also be adversely affected if it is unable to adjust to a rapid demand increase in the highly cyclical semiconductor industry. Additionally, any capacity expansion by the Company will increase its fixed operating expenses and if sales levels do not increase to offset the additional expense levels associated with any such expansion, the Company's operating results would likely be adversely affected.

International Operations and Sales

The Company has production, sales and service facilities in Germany, Japan, Korea and the United States and sales and service facilities in Canada, France, the Netherlands and the United Kingdom. In addition, the Company has established, through agents and representatives, sales and service facilities in China, India, Israel, Italy, Singapore and Taiwan. International sales (which include sales by the Company's foreign subsidiaries, but exclude export sales made directly by the Company, which were less than 10% of the Company's total net sales) accounted for approximately 32%, 30% and 28% of net

sales in 1995, 1996, and the first nine months of 1997, respectively. The Company anticipates that international sales will continue to account for a significant portion of its net sales. As a result, the Company's operations are subject to risks inherent in international business activities, including, in particular, general economic conditions in each country, the overlap of different tax structures, management of a large organization spread over various countries, unexpected changes in regulatory requirements, compliance with a variety of foreign laws and regulations and longer accounts receivables payment cycles in certain countries. The Company's international sales are also subject to certain governmental restrictions including the Export Administration Act and the regulations promulgated thereunder. Other risks associated with international operations include import and export licensing requirements, trade restrictions and changes in tariff and freight rates. A number of these risks also apply to sales to U.S. based semiconductor equipment OEMs that incorporate the Company's products into systems delivered outside the United States. Additionally, the Company denominates in local currencies the prices for products sold to and by its foreign subsidiaries, and, therefore, the Company's operating results attributable to these sales are exposed to fluctuations in the value of the U.S. dollar versus other currencies. While the Company seeks to mitigate its exposure to currency fluctuations by entering into forward exchange contracts and local currency purchased options to reduce currency exposure arising from foreign denominated sales associated with intercompany purchases of inventory, there can be no assurance that exchange rate fluctuations will not have an adverse effect on the Company's results of operations and financial condition or that the Company will not realize losses with respect to its hedging activities. See "Management's Discussion and Analysis of Financial Condition and Results of Operations."

Need to Retain and Attract Key Personnel

The Company's success depends to a large extent upon the efforts and abilities of a number of key employees and officers. The loss of key employees or officers could materially and adversely affect the Company. The Company believes that its future success will depend in part on its ability to attract and retain highly skilled technical, financial, managerial and marketing personnel. Competition for such personnel is intense and there can be no assurance that the Company will be successful in attracting and retaining such personnel.

Concentration of Stock Ownership

Upon consummation of this offering, John R. Bertucci, Chairman of the Board of Directors, Chief Executive Officer and President of the Company, and members of his family will, in the aggregate, beneficially own approximately 72% of the Company's outstanding Common Stock. As a result, these stockholders, acting together, would be able to control all matters requiring stockholder approval, including the election of directors and approval of significant corporate transactions. See "Principal Stockholders."

Intellectual Property Matters

Although the Company seeks to protect its intellectual property rights through patents, copyrights, trade secrets and other measures, there can be no assurance that the Company will be able to protect its technology adequately, that competitors will not be able to develop similar technology independently, that any of the Company's pending patent applications will be issued or that intellectual property laws will protect the Company's intellectual property rights. In addition, litigation may be necessary in order to enforce the Company's patents, copyrights or other intellectual property rights, to protect the Company's trade secrets, to determine the validity and scope of the proprietary rights of others or to defend against claims of infringement. Such litigation could result in substantial costs and diversion of resources and could have a material adverse effect on the Company's business and results of operations. There can be no assurance that any patent issued to the Company will not be challenged, invalidated or circumvented, that the rights granted thereunder will provide competitive advantages to the Company or that third parties may not assert that the Company's products infringe patent, copyright or trade secrets of such parties. Furthermore, there can be no assurance that others will not independently develop similar products or duplicate the Company's products.

Environmental Regulations

The Company's operations are subject to a variety of extensive and changing federal, state and local environmental and safety laws, regulations and ordinances. Such laws, regulations or ordinances may impose liability for the cost of remediating, and for certain damages resulting from, releases, including past releases, of hazardous materials. The Company believes that it currently conducts and in the past has conducted its activities and operations in substantial compliance with applicable environmental laws and believes that costs arising from existing environmental laws will not have a material adverse effect on the Company's financial condition or results of operations. There can be no assurance, however, that environmental laws will not become more stringent in the future or that the Company will not incur significant costs in the future in order to comply with such laws.

No Prior Public Market; Possible Volatility of Stock Price

Prior to this offering there has been no public market for the Company's Common Stock and there can be no assurance that an active public market for the Common Stock will develop or continue after the offering. The initial public offering price will be determined by negotiation between the Company and the representatives of the Underwriters. See "Underwriting." The trading price of the Company's Common Stock could be subject to wide fluctuations in response to quarterly variations in operating results, announcements of technological innovations or new products by the Company or its competitors or other events or factors. In addition, the stock market has experienced extreme price and volume fluctuations which have particularly affected the market prices for many high technology companies. These broad market fluctuations may materially and adversely affect the market price of the Company's Common Stock.

Dilution

Purchasers of Common Stock offered hereby will incur immediate and substantial dilution in the net tangible book value per share of Common Stock from the assumed initial public offering price. See "Dilution."

Antitakeover Provisions

Certain provisions of the Company's Articles of Organization, By-Laws and Massachusetts law could discourage potential acquisition proposals and could delay or prevent a change in control of the Company. Such provisions could diminish the opportunities for stockholders to participate in tender offers including tender offers at a price above the then current market value of the Common Stock. Such provisions may also inhibit increases in the market price of the Common Stock that could result from takeover attempts. In addition, the Board of Directors, without further stockholder approval, may issue preferred stock that could have the effect of delaying, deterring or preventing a change in control of the Company. The issuance of preferred stock could adversely affect the voting power of the holders of Common Stock including the loss of voting control to others. The Company has no present plans to issue any preferred stock. See "Description of Capital Stock."

Shares Eligible for Future Sale

Sales of substantial amounts of Common Stock in the public market following this offering could adversely effect the market price of the Common Stock. All of the outstanding shares of Common Stock are subject to lock-up agreements with the representatives of the Underwriters ("Lock-up Agreements") for a period of 180 days after the date of this Prospectus. Upon expiration of the Lock-up Agreements 180 days after the date of this Prospectus, 12,035,440 shares of Common Stock will be eligible for sale in the public market, subject to the provisions of Rule 144 under the Securities Act of 1933, as amended (the "Securities Act"). In addition, the Company intends to register approximately 3,020,500 shares of Common Stock issuable under its stock option and purchase plans upon the closing of this offering. See "Shares Eligible for Future Sale," "Description of Capital Stock" and "Underwriting."

Use of Proceeds

The net proceeds to the Company from the sale of the 4,000,000 shares of Common Stock offered hereby are estimated to be $ ($ if the Underwriters' over-allotment option is exercised in full), assuming an initial public offering price of $ per share, after deducting the estimated underwriting discount and offering expenses. The principal purposes of this offering are to increase the Company's working capital and equity base, to provide a public market for the Company's Common Stock and to facilitate future access by the Company to public equity markets.

The Company expects to use a portion of the net proceeds to pay to current stockholders the undistributed S corporation earnings of the Company through the closing of this offering. Such undistributed S corporation earnings were approximately $30.2 million at September 30, 1997 and are expected to increase from October 1, 1997 to the closing of this offering. See "S Corporation and Termination of S Corporation Status." The Company expects to use the remainder of the net proceeds for general corporate purposes, including working capital, product development and capital expenditures. The Company plans in 1998 to make capital expenditures totaling approximately $10 million, primarily for additions of capital equipment and for expansion of its manufacturing facilities and the Company expects to use a portion of the net proceeds for such purposes.

A portion of the net proceeds may also be used for the acquisition of businesses, products and technologies that are complementary to those of the Company. The Company has no commitments or understandings for any acquisitions and no portion of the net proceeds has been allocated for any specific acquisition. Pending such uses, the Company intends to invest the net proceeds from this offering in short-term, investment-grade, interest-bearing securities.

S Corporation and Termination of S Corporation Status

Effective July 1, 1987, the Company elected to be treated as an S corporation for federal income tax purposes. As a result, the Company currently pays no federal, and certain state, income tax and all of the earnings of the Company are subject to federal, and certain state, income taxation directly at the stockholder level. The Company's S corporation status will terminate upon the closing of this offering, at which time the Company will become subject to corporate income taxation under Subchapter C of the Internal Revenue Code of 1986, as amended (the "Code").

In 1996 and in the first nine months of 1997, the Company distributed $14.5 million and $6.4 million, respectively, of undistributed S corporation earnings to its stockholders. The Company expects to make additional distributions of approximately $5.5 million prior to the closing of this offering.

As soon as practicable following the closing of the offering, the Company intends to make a distribution (the "S Corporation Distribution") to the holders of record on the day prior to the closing of this offering (the "Existing Stockholders") in an amount equivalent to the "accumulated adjustments account," as defined in Section 1368(a)(1) of the Code (the "AA Account"). As of September 30, 1997, the outstanding balance of the AA Account was approximately $30.2 million, and such balance is expected to increase in the period from October 1, 1997 through the closing of the offering. The AA Account is cumulatively equal to financial reporting income, adjusted for differences between the methods of accounting used for financial accounting and for federal income tax purposes from the effective date of the Company's election to be treated as an S corporation through the date of termination of the Company's S corporation status, that has not been previously distributed. Investors purchasing shares in this offering will not receive any portion of the S Corporation Distribution.

The Company expects to enter into a Tax Indemnification and S Corporation Distribution Agreement (the "Existing Stockholders Agreement") with the Existing Stockholders providing for, among other things, the indemnification of the Company by such stockholders for any federal and state income taxes (including interest) incurred by the Company if for any reason the Company is deemed to be treated as a C corporation during any period which it reported its taxable income as an S corporation. The tax indemnification obligation of the Existing Stockholders is limited to the amount of any reduction in their tax liability as a result of any such determination. The Existing Stockholders Agreement also provides for the cross-indemnification by the Company of each Existing Stockholder for any losses or liabilities with respect to certain additional taxes (including interest and penalties) resulting from the Company's operations during the period in which it was an S corporation. The Existing Stockholders Agreement further provides for the payment, with interest, by the Existing Stockholders or the Company, as the case may be, for the difference between the S Corporation Distribution amount and the actual amount of the AA Account on the day immediately preceding the closing of the offering. The actual amount of the AA Account on the day prior to the closing of the offering cannot be determined until the Company calculates the amount of its taxable income for the year ending December 31, 1998. Purchasers of Common Stock in this offering will not be parties to the Existing Stockholders Agreement.

The termination date of the Company's S corporation status will occur on the closing date of this offering. Subsequent to the termination date, the Company will no longer be an S corporation and, accordingly, will be subject to federal and state income taxes. The pro forma Statement of Income set forth in this Prospectus has been adjusted to include pro forma federal income tax provisions as if the Company had been a C corporation under Subchapter C of the Code during the relevant periods.

Dividend Policy

The Company anticipates that following the completion of this offering and the S Corporation Distribution, subject to the Company's contractual obligations under the Existing Stockholders Agreement, all earnings will be retained for development of its business and will not be distributed to stockholders as dividends. Restrictions or limitations on the payment of dividends may be imposed in the future under the terms of credit agreements or under other contractual provisions. In the absence of such restrictions or limitations, the payment of any dividends will be at the discretion of the Company's Board of Directors.

Capitalization

The following table sets forth the capitalization of the Company (i) as of September 30, 1997, (ii) on a pro forma basis to reflect distributions and adjustments in connection with the Company's S corporation status and (iii) as adjusted to reflect the sale of 4,000,000 shares of Common Stock by the Company at an assumed initial public offering price of $ per share and the application of the net proceeds therefrom. See "Use of Proceeds."

SEPTEMBER 30, 1997 PRO FORMA ACTUAL PRO FORMA(1) AS ADJUSTED(1)(2) (IN THOUSANDS, EXCEPT SHARE AND PER SHARE DATA)

Long-term obligations, less current portion.....	$16,348	$ 16,348	$
Stockholders' equity:			
Preferred stock, $.01 par value; 2,000,000 shares authorized; no shares issued or outstanding.....	--	--	--
Common Stock, no par value; 50,000,000 shares authorized, 12,035,440 shares issued and outstanding (actual and pro forma); 16,035,440 shares issued and outstanding (pro forma as adjusted)(3).....	113	113	
Additional paid-in capital.....	48	48	
Unrealized gain on investments.....	562	562	
Retained earnings.....	50,045	19,862	
Cumulative translation adjustment.....	988	988	
Total stockholders' equity.....	51,756	21,573	
Total capitalization.....	$68,104	$ 37,921	$

(1) Pro forma data reflects the distribution of an estimated $30.2 million, calculated as of September 30, 1997, of cumulative undistributed S corporation taxable income for which stockholders of record prior to the closing of the offering have been or will be taxed. The actual amount to be distributed is expected to increase based upon taxable earnings for the period from October 1, 1997 through the closing of the offering, subject to certain limitations. See "S Corporation and Termination of S Corporation Status" and Notes 2 and 9 of Notes to Consolidated Financial Statements.

(2) As adjusted to reflect the issuance of 4,000,000 shares of Common Stock at an assumed initial public offering price of $ per share, after deducting the estimated underwriting discount and offering expenses payable by the Company.

(3) Gives effect to (i) a 2,110-for-1 stock split to be effected prior to the closing of this offering and the conversion upon the closing of this offering, of the 2,454 shares of Class A Common Stock and 3,250 shares of Class B Common Stock outstanding at September 30, 1997 into an aggregate of 12,035,440 shares of Common Stock and (ii) the filing of an amendment to the Company's Restated Articles of Organization to increase the number of authorized shares of Common Stock to 50,000,000 and to authorize 2,000,000 shares of Preferred Stock prior to the closing of this offering.

Dilution

As of September 30, 1997, the Company had a net tangible book value of $51,756,000, or $4.30 per share of Common Stock. Without taking into account any changes in such net tangible book value subsequent to September 30, 1997, other than to give effect to the sale by the Company of 4,000,000 shares of Common Stock offered hereby at an assumed initial public offering price of $ per share (after deducting the estimated underwriting discount and offering expenses) and the application of the estimated proceeds therefrom, including the distribution of an estimated $30.2 million of cumulative undistributed S corporation taxable income for which stockholders have been or will be taxed, as of September 30, 1997, the pro forma net tangible book value of the Company as of September 30, 1997

would have been $, or $ per share. This represents an immediate increase in net tangible book value of $ per share to current shareholders and the immediate dilution of $ per share to new investors. The following table illustrates this per share dilution:

Assumed initial public offering price per share..... $ Net tangible book value per share at September 30, 1997..... $4.30 Decrease per share attributable to the S Corporation Distribution... Increase per share attributable to new investors..... Pro forma net tangible book value per share after the offering..... Dilution per share to new investors..... $ The following table summarizes, on a pro forma basis as of September 30, 1997, the number of shares of Common Stock purchased from the Company, the total consideration paid to the Company, and the average price per share paid by the existing stockholders and by the investors purchasing shares of Common Stock in this offering at an assumed initial offering price of $ per share:

	SHARES PURCHASED		TOTAL CONSIDERATION		
	NUMBER	PERCENT	AMOUNT	PERCENT	AVERAGE PRICE PER SHARE
Existing stockholders.....	12,035,440	75.1%	$ 161,000	%	$ 0.013
New investors.....	4,000,000	24.9			
Total.....	16,035,440	100.0%	$	100.00%	

As of September 30, 1997, there were options outstanding to purchase a total of 1,042,361 shares of Common Stock, at an exercise price of $6.64 per share. To the extent that any of these options are exercised, there will be further dilution to new investors.

Selected Consolidated Financial Data

The following selected financial data as of December 31, 1995 and 1996 and September 30, 1997 and for the years ended December 31, 1994, 1995 and 1996, and the nine month period ending September 30, 1997, have been derived from the Company's financial statements, included elsewhere in this Prospectus, which have been audited by Coopers & Lybrand L.L.P., independent accountants, as indicated in their report. The selected financial data as of and for the nine month period ended September 30, 1996 have been derived from unaudited financial statements that have been prepared on the same basis as the Company's audited financial statements and which, in the opinion of management, included all adjustments, consisting only of normal recurring adjustments, necessary for a fair presentation of the Company's financial position and results of operations. The selected financial data as of December 31, 1992, 1993 and 1994 and for the years ended December 31, 1992 and 1993 are derived from financial statements, which were also audited by Coopers & Lybrand L.L.P., not included herein. Operating results for the nine months ended September 30, 1997 are not necessarily indicative of the results that may be expected for the year ending December 31, 1997. The data should be read in conjunction with the Consolidated Financial Statements, including the Notes thereto, and with "Management's Discussion and Analysis of Financial Condition and Results of Operations" included elsewhere herein.

NINE MONTHS

	YEAR ENDED DECEMBER 31,						
	1992	1993	1994	1995	1996	1996	1997
	(IN THOUSANDS, EXCEPT PER SHARE DATA)						
STATEMENT OF INCOME DATA:							
Net sales	$73,260	$80,852	$106,829	$157,164	$170,862	$136,097	$134,629
Cost of sales	42,632	46,784	59,813	87,703	102,008	81,078	78,456
Gross profit	30,628	34,068	47,016	69,461	68,854	55,019	56,173
Research and development	5,836	6,244	8,036	10,935	14,195	11,220	10,336
Selling, general and administrative	20,199	21,459	26,893	34,420	37,191	29,409	30,749
Restructuring	0	0	0	0	1,400	1,400	0
Income from operations	4,593	6,365	12,087	24,106	16,068	12,990	15,088
Interest expense, net	1,784	1,421	1,284	1,448	2,286	1,811	1,466
Other income (expense), net	--	--	--	--	(479)	(230)	460
Income before income taxes	2,809	4,944	10,803	22,658	13,303	10,949	14,082
Provision for income taxes(1)	163	593	800	1,000	800	658	1,190
Net income	$ 2,646	$ 4,351	$ 10,003	$ 21,658	$ 12,503	$ 10,291	$ 12,892
PRO FORMA STATEMENT OF INCOME DATA (UNAUDITED)(2):							
Income before income taxes, as reported					$ 13,303	$ 14,082	
Pro forma provision for income taxes					5,055	5,351	
Pro forma net income					$ 8,248	$ 8,731	
Pro forma net income per common share					$ 0.59	$ 0.62	

	DECEMBER 31,					
	1992	1993	1994	1995	1996	SEPTEMBER 30, 1997
				(IN THOUSANDS)		ACTUAL PRO FORMA(3)
BALANCE SHEET DATA:						
Working capital	$19,293	$18,420	$25,078	$ 32,202	$22,404	$ 29,479 $ (704)
Total assets	60,697	59,261	72,320	104,511	95,000	106,685 106,685
Short-term obligations	9,141	6,229	9,246	15,192	16,124	16,372 16,372
Long-term obligations, less current portion	15,761	15,326	14,948	20,462	18,899	16,348 16,348
Stockholders' equity	29,593	28,965	37,272	48,392	45,498	51,756 21,573

(1) Effective July 1, 1987, the Company elected to be treated as an S corporation under the applicable provisions of the Internal Revenue Code of 1986. As an S corporation, the Company has not been subject to federal, and certain state, income taxes. The pro forma net income reflects the provision for income taxes that would have been recorded had the Company been a C corporation, assuming an effective tax rate of 38.0%. As a result of terminating its S corporation status upon the closing of this offering, the Company will record a one-time non-cash credit to historical earnings for additional deferred taxes. If this credit to earnings had occurred at September 30, 1997, the amount would have been approximately $2.8 million. This amount is expected to change through the closing of the offering and is excluded from pro forma net income. See Notes 2 and 9 of Notes to Consolidated Financial Statements.

(2) In accordance with a regulation of the Securities and Exchange Commission, the pro forma net income per share and weighted average common shares outstanding reflect the effect of an assumed issuance of sufficient shares to fund the S Corporation Distribution, as of January 1, 1997, to be made out of the proceeds of this offering. See "S Corporation and Termination of S Corporation Status" and Note 2 of Notes to Consolidated Financial Statements.

(3) Pro forma balance sheet data reflects the distribution of an estimated $30.2 million, calculated as of September 30, 1997, of cumulative undistributed S corporation taxable income for which stockholders of record prior to the closing of this offering have been or will be taxed. The actual amount to be distributed is expected to increase based upon taxable earnings for the period October 1, 1997 through the closing of the offering, subject to certain limitations. See "Use of Proceeds," "S Corporation and Termination of S Corporation Status" and Notes 2 and 9 of Notes to Consolidated Financial Statements.

Management's Discussion and Analysis of Financial Condition and Results of Operations

The following discussion of the results of operations and financial condition should be read in conjunction with the Company's Consolidated Financial Statements and Notes thereto included elsewhere in this Prospectus. With the exception of historical matters and statements of current status, certain matters discussed below are forward-looking statements that involve substantial risks and uncertainties that could cause actual results to differ materially from targets or projected results. Factors that could cause actual results to differ materially include, among others, those factors described in "Risk Factors." Many of these factors are beyond the Company's ability to predict or control. Prospective investors are cautioned not to put undue reliance on forward-looking statements, which statements have been made as of the date of this Prospectus, and prospective investors should not infer that there has been no change in the affairs of the Company since the date hereof that would warrant any modification of any forward-looking statement made herein. The Company disclaims any intent or obligation to update publicly these forward-looking statements, whether as a result of new information, future events or otherwise.

Overview

MKS was founded in 1961. The Company sells instruments and components to OEMs and end-users in the semiconductor and other advanced thin-film processing industries. For the past three years and the first nine months of 1997, the Company estimates that approximately two-thirds of its net sales were to semiconductor equipment OEMs and semiconductor device manufacturers. The Company expects that sales to such customers will continue to account for a substantial majority of its sales. The Company typically enters into contracts with its semiconductor equipment OEM customers that provide for quantity discounts. The Company recognizes revenues, and accrues for anticipated returns and warranty costs, upon shipment.

In the third quarter of 1996, as a result of the downturn in the semiconductor industry, the Company recorded a restructuring charge of $1.4 million. The charge was primarily related to a reduction of personnel and the closure of certain facilities and included the cost of severance, lease commitments and the write-off of leasehold improvements.

A significant portion of the Company's sales are to operations in international markets. International sales by the Company's foreign subsidiaries were 30.1% and 27.9% of net sales for 1996 and for the nine months ended September 30, 1997, respectively. The Company does not classify export sales made directly by the Company as international sales. Such sales were less than 10% of net sales. The Company's foreign subsidiaries conduct their business in local currencies and the Company derives a significant portion of its cash flows from foreign denominated revenues. The Company plans to enter into forward exchange contracts and local currency purchased options to reduce currency exposure arising from foreign denominated sales associated with the intercompany purchases of inventory. Gains and losses on derivative financial instruments that qualify for hedge accounting are classified in cost of sales. Gains and losses on derivative financial instruments that do not qualify for hedge accounting are marked-to-market and recognized immediately in other income. See Note 2 to Notes to Consolidated Financial Statements.

Effective July 1, 1987, the Company elected to be treated as an S corporation for federal income tax purposes. The Company's S corporation status will terminate upon the closing of this offering, at which time the Company will become subject to federal, and certain state, income taxation as a C corporation. The pro forma net income reflects a pro forma effective tax rate of 38.0% to reflect federal and state income taxes which would have been payable for 1996 and the first nine months of 1997 had the Company been taxed as a C corporation.

Results of Operations

The following table sets forth for the periods indicated the percentage of total sales of certain line items included in the Company's consolidated statement of income data:

				NINE MONTHS ENDED	
YEAR ENDED DECEMBER 31,				SEPTEMBER 30,	
1994	1995	1996		1996	1997

Net sales	100.0%	100.0%	100.0%	100.0%	100.0%
Cost of sales	56.0	55.8	59.7	59.6	58.3
Gross profit	44.0	44.2	40.3	40.4	41.7
Research and development	7.5	7.0	8.3	8.3	7.7
Selling, general and administrative	25.2	21.9	21.8	21.6	22.8
Restructuring	0.0	0.0	0.8	1.0	0.0
Income from operations	11.3	15.3	9.4	9.5	11.2
Interest expense, net	1.2	0.9	1.3	1.3	1.1
Other income (expense), net	0.0	0.0	(0.3)	(0.2)	0.4
Income before income taxes	10.1	14.4	7.8	8.0	10.5
Provision for income taxes	0.7	0.6	0.5	0.4	0.9
Net income	9.4%	13.8%	7.3%	7.6%	9.6%
Pro forma data:					
Historical income before income taxes			7.8%		10.5%
Pro forma provision for income taxes			3.0		4.0
Pro forma net income			4.8%		6.5%

Nine Months Ended September 30, 1997 Compared to Nine Months Ended September 30, 1996

Net Sales. Net sales decreased 1.1% to $134.6 million for the nine months ended September 30, 1997 from $136.1 million for the same period of 1996. International net sales decreased 5.9% to $37.5 million (27.9% of net sales) for the first nine months of 1997 from $39.9 million (29.3% of net sales) for the first nine months of 1996. The decrease in net sales and international net sales was primarily due to the downturn in the semiconductor industry that began in 1996 and adversely affected the third quarter of 1996, as well as the first and second quarters of 1997.

Gross Profit. Gross profit as a percentage of sales increased to 41.7% for the nine months ended September 30, 1997 from 40.4% for the same period of 1996. The change was due primarily to the reduction in fixed costs resulting from the restructuring effected in the third quarter of 1996.

Research and Development. Research and development expenses decreased 7.9% to $10.3 million (7.7% of net sales) for the nine months ended September 30, 1997 from $11.2 million (8.2% of net sales) for the same period of 1996. The decrease was primarily due to lower staffing levels and project cost reductions during the first nine months of 1997 as a result of the restructuring effected in the third quarter of 1996. The Company expects research and development expenses to continue to increase as the Company continues to work to develop products to address advances in the semiconductor industry, such as the trend toward smaller device geometries and larger wafer sizes.

Selling, General and Administrative. Selling, general and administrative expense increased 4.6% to $30.7 million (22.8% of net sales) for the nine months ended September 30, 1997 from $29.4 million (21.6% of net sales) for the same period of 1996. The increase was due primarily to increased staffing levels and compensation expense, and the write-off of certain assets.

Restructuring. In the third quarter of 1996, as a result of the downturn in the semiconductor industry, the Company recorded a restructuring charge of $1.4 million. The charge was primarily related to a reduction of personnel and the closure of certain facilities and included the cost of severance, lease commitments and the write-off of leasehold improvements.

Interest Expense, Net. Net interest expense decreased 19.1% to $1.5 million for the nine months ended September 30, 1997 from $1.8 million for the same period of 1996 primarily due to lower debt outstanding during 1997.

Other Income (Expense), Net. Other expense of $0.2 million for the nine months ended September 30, 1996 and other income of $0.5 million for the nine months ended September 30, 1997 reflect losses and gains, respectively, from foreign exchange contracts that did not qualify for hedge accounting.

Provision for Income Taxes. Effective July 1, 1987, the Company elected to be treated as an S corporation under the applicable provisions of the Code, and as a result has not been subject to federal income taxes, but it has been subject to certain state income taxes. The provision for income taxes is comprised of foreign income taxes and certain state income taxes. The provision increased to $1.2 million for the nine months ended September 30, 1997 from $0.7 million for the same period of 1996 primarily due to increased income.

Pro Forma Provision for Income Taxes. The pro forma provision for income taxes for the nine months ended September 30, 1997 reflects the estimated tax expense the Company would have incurred had it been subject to federal and state income taxes as a C corporation under the Code. The pro forma provision reflects a pro forma effective tax rate of 38.0%, which differs from the federal statutory rate due primarily to the effects of state and foreign taxes and certain tax credits.

Year Ended December 31, 1996 Compared to Year Ended December 31, 1995

Net Sales. Net sales increased 8.7% to $170.9 million for 1996 from $157.2 million for 1995. International net sales were $51.4 million for 1996 (30.1% of net sales) and $50.2 million for 1995 (31.9% of net sales). In the fourth quarter of 1995 the Company purchased UTI Instruments Company ("UTI"), a designer and manufacturer of gas monitoring instrumentation, for $4.4 million in cash. The increase in net sales was due primarily to the inclusion of sales by UTI as well as increased worldwide sales of the Company's existing products.

Gross Profit. Gross profit as a percentage of net sales decreased to 40.3% for 1996 from 44.2% for 1995. The decrease was primarily due to higher fixed costs resulting from manufacturing capacity expansion and lower margins initially earned on certain new products.

Research and Development. Research and development expenses increased 29.8% to $14.2 million (8.3% of net sales) for 1996 from $10.9 million (7.0% of net sales) for 1995. The increase was primarily due to the inclusion of a full year of costs associated with UTI and costs associated with the development of new products.

Selling, General and Administrative. Selling, general and administrative expenses increased 8.1% to $37.2 million (21.8% of net sales) for 1996 from $34.4 million (21.9% of net sales) for 1995. The increase was primarily due to the inclusion of a full year of costs associated with UTI.

Restructuring. In the third quarter of 1996 the Company recorded a restructuring charge of $1.4 million. The charge was primarily related to a reduction of personnel and the closure of certain facilities and included the cost of severance, lease commitments and the write-off of leasehold improvements.

Interest Expense, Net. Net interest expense increased to $2.3 million in 1996 from $1.4 million in 1995 primarily due to increased debt outstanding during 1996.

Other Income (Expense), Net. Other expense of $0.5 million in 1996 represents losses from foreign exchange contracts that did not qualify for hedge accounting.

Provision for Income Taxes. The provision for income taxes is comprised of foreign income taxes and certain state income taxes. The provision decreased to $0.8 million in 1996 from $1.0 million in 1995 primarily due to lower income.

Pro Forma Provision for Income Taxes. The pro forma provision for income taxes in 1996 reflects the estimated tax expense the Company would have incurred had it been subject to federal and state income taxes as a C corporation under the Code. The pro forma provision reflects a pro forma effective tax rate of 38.0%, which differs from the federal statutory rate due primarily to the effects of state and foreign taxes and certain tax credits.

Year Ended December 31, 1995 Compared to Year Ended December 31, 1994

Net Sales. Net sales increased 47.1% to $157.2 million for 1995 from $106.8 million in 1994. International net sales increased 44.0% to $50.2 million (31.9% of net sales) for 1995 from $34.8 million (32.6% of net sales) in 1994. These increases were due primarily to increased worldwide sales volume to customers in the semiconductor industry.

Gross Profit. Gross profit as a percentage of net sales was substantially the same for 1995 (44.2%) and 1994 (44.0%).

Research and Development. Research and development expenses increased 36.1% to $10.9 million (7.0% of net sales) for 1995 from $8.0 million (7.5% of net sales) in 1994. The increase in the dollar amount of the expenses was primarily due to increased staffing levels and other costs associated with continued development of new products.

Selling, General and Administrative. Selling, general and administrative expenses increased 28.0% to $34.4 million (21.9% of net sales) for 1995 from $26.9 million (25.2% of net sales) for 1994. The increase in expenses during 1995 was primarily due to the establishment of sales and service subsidiaries in Europe and Korea, increased selling costs, higher staffing levels and other general and administrative costs incurred to support the Company's increased sales volume.

Interest Expense, Net. Net interest expense increased to $1.4 million for 1995 from $1.3 million for 1994, primarily due to increased debt outstanding during 1995.

Provision for Income Taxes. The provision for income taxes is comprised of foreign income taxes and certain state income taxes. The provision increased to $1.0 million for 1995 from $0.8 million for 1994 primarily due to increased income.

Selected Quarterly Operating Results

The following tables present unaudited consolidated financial information for the seven quarters ended September 30, 1997. In the opinion of management this information has been presented on the same basis as the audited Consolidated Financial Statements appearing elsewhere in this Prospectus and all adjustments (consisting only of normal recurring adjustments) which management considers necessary for a fair presentation of the results of such periods have been included in the amounts stated below to present fairly the unaudited quarterly results when read in conjunction with the Company's Consolidated Financial Statements and Notes thereto. The results for any quarter are not necessarily indicative of future quarterly results of operations.

	QUARTER ENDED						
	MARCH 31, 1996	JUNE 30, 1996	SEPT. 30, 1996	DEC. 31, 1996	MARCH 31, 1997	JUNE 30, 1997	SEPT. 30, 1997
	(IN THOUSANDS)						
STATEMENT OF INCOME DATA:							
Net sales	$49,811	$ 48,278	$38,008	$ 34,765	$40,520	$ 45,749	$48,360
Cost of sales	29,610	29,235	22,233	20,930	24,277	26,413	27,766
Gross profit	20,201	19,043	15,775	13,835	16,243	19,336	20,594
Research and development	3,560	4,031	3,629	2,975	2,994	3,563	3,779
Selling, general and administrative	10,113	10,595	8,701	7,782	9,612	10,321	10,816
Restructuring	0	0	1,400	0	0	0	0
Income from operations	6,528	4,417	2,045	3,078	3,637	5,452	5,999
Interest expense, net	475	675	661	475	494	527	445
Other income (expense), net	(12)	(9)	(209)	(249)	275	(447)	632
Income before income taxes	6,041	3,733	1,175	2,354	3,418	4,478	6,186
Provision for income taxes	363	224	71	142	289	378	523
Net income	$ 5,678	$ 3,509	$ 1,104	$ 2,212	$ 3,129	$ 4,100	$ 5,663

	QUARTER ENDED						
	MARCH 31, 1996	JUNE 30, 1996	SEPT. 30, 1996	DEC. 31, 1996	MARCH 31, 1997	JUNE 30, 1997	SEPT. 30, 1997
PERCENTAGE OF NET SALES:							
Net sales	100.0%	100.0%	100.0%	100.0%	100.0%		

100.0%	100.0%				
Cost of sales.....	59.4	60.6	58.5	60.2	59.9
57.7	57.4				
Gross profit.....	40.6	39.4	41.5	39.8	40.1
42.3	42.6				
Research and development.....	7.2	8.4	9.5	8.5	7.4
7.8	7.8				
Selling, general and administrative.....	20.3	21.9	22.9	22.4	23.7
22.6	22.4				
Restructuring.....	0.0	0.0	3.7	0.0	0.0
0.0	0.0				
Income from operations.....	13.1	9.1	5.4	8.9	9.0
11.9	12.4				
Interest expense, net.....	1.0	1.4	1.7	1.4	1.2
1.1	0.9				
Other income (expense), net.....	0.0	0.0	(0.6)	(0.7)	0.6
(1.0)	1.3				
Income before income taxes.....	12.1	7.7	3.1	6.8	8.4
9.8	12.8				
Provision for income taxes.....	0.7	0.4	0.2	0.4	0.7
0.8	1.1				
Net income.....	11.4%	7.3%	2.9%	6.4%	7.7%
9.0%	11.7%				

The Company's quarterly operating results have varied significantly and are likely to continue to vary significantly due to a number of factors including specific economic conditions in the industries in which the Company's customers operate, particularly the semiconductor industry; the timing of the receipt of orders from major customers; customer cancellations or shipment delays; price competition; disruption in sources of supply; seasonal variations of capital spending by customers; production capacity constraints; specific features requested by customers; exchange rate fluctuations; the introduction or announcement of new products by the Company or its competitors; and other factors, many of which are beyond the Company's control. See "Risk Factors -- Fluctuations in Operating Results."

The Company's net sales have fluctuated over the past seven quarters primarily due to the decline in the semiconductor industry in 1996 that adversely affected sales of the Company's products in the third and fourth quarters of 1996 and the first and second quarters of 1997.

Gross profit as a percentage of net sales decreased for the second quarter of 1996 primarily due to higher fixed costs resulting from manufacturing capacity expansion. Gross profit as a percentage of net sales improved in the third quarter of 1996 primarily due to reduced overhead costs as a result of the Company's restructuring. Gross profit as a percentage of net sales decreased in the fourth quarter of 1996 primarily as a result of lower net sales relative to fixed costs. Gross profit as a percentage of net sales increased in the first, second and third quarters of 1997 primarily as a result of fuller utilization of existing manufacturing capacity as a result of increased net sales.

Research and development expenses increased in the second quarter of 1996 primarily as a result of increased staffing levels and costs related to product development support. The reduction in research and development expenses in the third and fourth quarters of 1996 was primarily due to lower staffing levels and project cost reductions. The increase in research and development expenses for the second and third quarters of 1997 was primarily due to increased staffing levels.

Selling, general and administrative expenses decreased in the third and fourth quarters of 1996 primarily due to a reduction of general and administrative staffing levels as a result of the restructuring effected in the third quarter of 1996 and other cost reductions, and increased in the first quarter of 1997 primarily due to increased staffing levels and increased compensation expense. The increase in selling, general and administrative expenses in the second and third quarter of 1997 was primarily due to increased compensation expense and the write-off of certain assets with no remaining value.

Other income primarily represents gains and losses on foreign exchange contracts.

Liquidity and Capital Resources

The Company has financed its operations and capital requirements through a combination of cash provided by operations, long-term real estate financing, capital lease financing and short-term lines of credit.

Operations provided cash of $7.7 million, $13.2 million, $26.3 million and $11.7 million for 1994, 1995, 1996 and the first nine months of 1997, respectively, primarily impacted in each period by net income, depreciation and changes in the levels of inventory and accounts receivable. Investing activities utilized cash of $4.0 million, $13.2 million, $10.2 million, and $2.6 million in 1994, 1995, 1996 and the first nine months of 1997, respectively, primarily for the purchase of property and equipment in each period and, in 1994, for the purchase of investments and, in 1995, the acquisition of UTI. Financing activities utilized cash of $2.3 million, $0.4 million, $15.6 million and $7.9 million in 1994, 1995, 1996 and the first nine months of 1997, respectively, primarily for stockholder distributions in each period. Cash flows from financing activities for each period were primarily from short-term and long-term borrowings.

Working capital was $29.5 million as of September 30, 1997. The Company has a combined $20.0 million unsecured revolving line of credit with two domestic financial institutions, expiring June 30, 1999. The unused balance under this revolving line of credit was $17.5 million at September 30, 1997. The Company also has lines of credit through its foreign subsidiaries with several financial institutions, totaling $13.3 million at September 30, 1997. The total unused balance under these lines of credit was $2.6 million at September 30, 1997. These lines generally expire and are renewed at six month intervals. In addition, the Company has outstanding term loans and mortgage loans from banks totaling $14.4 million (net of the current portion) at September 30, 1997. See Note 6 of Notes to Consolidated Financial Statements.

The Company believes that the net proceeds from this offering, together with the cash anticipated to be generated from operations and funds available from existing credit facilities, will be sufficient to satisfy its estimated working capital and planned capital expenditure requirements through at least the next 12 months.

Effect of Currency Exchange Rates and Exchange Rate Risk Management.

A significant portion of the Company's business is conducted outside of the United States through its foreign subsidiaries. The foreign subsidiaries maintain their accounting records in their local currencies. Consequently, period to period comparability of results of operations is affected by fluctuations in exchange rates. The Company derives a significant portion of its cash flows from foreign denominated revenue. To the extent the dollar value of foreign denominated revenue is diminished as a result of a strengthening dollar, the Company's results of operations and cash flows could be adversely affected. To mitigate the risks associated with foreign currency rate fluctuations, the Company has entered into forward exchange contracts and local currency purchased options on a continuing basis in amounts and timing consistent with the underlying currency exposures. Gains on forward exchange contracts and local currency purchased options, qualifying for hedge accounting, amounted to $0.9 million, $1.9 million and $2.5 million for the years ended December 31, 1994, 1995 and 1996, respectively, and $1.6 million and $1.0 million for the nine months ended September 30, 1996 and 1997, respectively, and are classified in cost of sales. Losses of $0.5 million, $0.2 million and gains of $0.5 million on forward exchange contracts that did not qualify for hedge accounting were recognized in earnings for 1996 and the nine months ended September 30, 1996 and 1997, respectively, and are classified in other income (expense), net. While the Company does not issue or hold derivative financial instruments for trading purposes, there can be no assurance that any losses realized on such instruments will be fully offset by gains on the underlying exposure. Prospectively, the Company plans to use local currency purchased options, and to a lesser extent forward exchange contracts, to seek to mitigate the impact of exchange rate fluctuations. See Notes 2 and 3 of Notes to Consolidated Financial Statements.

Recently Issued Accounting Pronouncements

See Note 2 of Notes to Consolidated Financial Statements for a discussion of the impact of recently issued accounting pronouncements.

Business

The Company is a leading worldwide supplier of instruments and components used to measure, control, analyze and isolate gases in semiconductor and other manufacturing processes. The Company offers a comprehensive line of products which are used around the process chamber in both semiconductor front-end manufacturing processes and other advanced thin-film and vacuum-based processes used in the manufacture of, among other things, flat panel displays, magnetic and optical storage media, solar cells, fiber optic cables and gas lasers. The Company's products include: (i) pressure and flow measurement and control instruments; (ii) vacuum gauges, valves and components; and (iii) gas analysis instruments.

For over 20 years the Company has been focused on serving the needs of semiconductor device manufacturers and semiconductor equipment OEMs and has established long-term relationships with many of its customers. The Company has over 4,000 customers worldwide including most major semiconductor equipment OEMs, semiconductor device manufacturers, a broad range of industrial companies and university, government and industrial research laboratories. The Company's customers in its principal market, the semiconductor market, include Applied Materials, Eaton, Hitachi, Lam Research, TEL and ULVAC. The Company sells its products primarily through its direct sales force in 22 offices in Canada, France, Germany, Japan, Korea, the Netherlands, the United Kingdom and the United States.

Industry Background

In the past 35 years, significant advances in materials science and processing technologies have enabled the manufacture of products ranging from highly complex microprocessor chips to simple but effective impervious coatings for food packaging. In many materials processing applications, specific gas mixtures at precisely controlled pressures are used to create and maintain the required process atmosphere, serve as a medium to deposit source material on a substrate and provide the etchant media for removing materials from a substrate. The largest commercial application of materials science technology processes is in the manufacture of semiconductor devices.

Worldwide semiconductor sales have increased as the use of semiconductors has expanded beyond personal computer and computer systems to a wide array of additional applications such as telecommunications and data communications systems, automotive products, consumer goods, medical products and household appliances. In large part, this growth has been facilitated by the ability of semiconductor manufacturers to produce increasingly fast, more complex, higher performance semiconductors while steadily reducing cost per function, power consumption requirements and size of these products to meet end-user and system designer requirements. These improvements in the ratio of price to performance have been enabled by advancements in semiconductor process technology, which have facilitated the ability to reduce circuit geometries and subsequently increase transistor densities, or the number of transistors on a silicon wafer. These trends have driven the need for increasingly complex and sophisticated semiconductor device manufacturing processes, process equipment and process controls.

Semiconductor Manufacturing Process

The front-end of the semiconductor manufacturing process, or wafer processing, requires hundreds of process steps involving the controlled application of materials on silicon wafers. These process steps take place within a process chamber, which provides a controlled environment for the fabrication of semiconductor devices. Most of the key front-end processes used in the production of semiconductors require precise control of gas pressure, flow and composition in the process chamber.

To ensure the integrity and performance of the manufacturing process, semiconductor device manufacturers require sophisticated instruments that can provide precise automated control of all major process variables within the process chamber. The process steps required to produce device features involve the control of multiple gases flowing into the process chamber at specified intervals, and at controlled pressure and vacuum levels. In a typical process step, the process chamber is evacuated to a base pressure established by a vacuum pumping system and measured with vacuum gauges. Automatic shut-off valves are sequenced to protect pumps and process instruments from exposure to atmospheric pressure. Chamber leak integrity may be checked by gas analyzers scanning for the presence of undesirable atmospheric gases or water vapor. Mass flow controllers automatically control the flow rates of multiple gases into the process chamber. Simultaneously, the automatic pressure control system for the process chamber measures the pressure in the chamber and controls it at the desired level by electronically adjusting the position of a control valve located between the process chamber and the vacuum pump. Downstream of the process chamber, heated lines and vacuum valves and switches are used to prevent contamination of the devices as a result of backstreaming of particles and exhaust gases into the process chamber.

The front-end process steps involving gaseous media include deposition, etch, ion implantation, plasma stripping and cleaning, rapid thermal processing, diffusion and epitaxy. The most frequently employed front-end process steps requiring gaseous media are deposition, etch and ion implantation.

Deposition involves the formation of several layers of conducting, semiconducting and insulating thin films on the surface of a wafer. The two principal methods of film deposition are physical vapor deposition ("PVD"), which is used primarily to deposit conductive metal layers, and chemical vapor deposition ("CVD"), which is used primarily to deposit semiconducting and insulating thin films. In the PVD process, wafers are typically placed in a process chamber where solid sources of film materials mounted in the chamber are sputtered onto the wafer surface at precisely controlled pressures and temperatures. In the CVD process, a specially designed gas or vaporized liquid material is introduced into a pressure and temperature controlled process chamber containing the wafers. The gases interact with the wafer surface to form a semiconducting or insulating layer. The pressure in the process chamber during the deposition process and the mixture of deposition gases must be tightly controlled to achieve uniform film thickness and composition.

The etching process creates the line-widths and other feature sizes on integrated circuits. To produce specified line-widths manufacturers typically employ plasma etching techniques, which use ionized gases that chemically react with unprotected portions of the wafer to create the thinly etched features that form the patterns of the device. The pressure in the etch chamber and the mixture of etchant gases must be precisely controlled to achieve the specified side wall angle and ratio of line-widths to depths. Plasma stripping and cleaning are etching processes used to prepare the wafer surface for further processing steps.

In the ion implantation process, ions of certain materials are formed in minuscule quantities from gases introduced into a chamber on the implantation tool. The ions are generated in the chamber and are accelerated into the silicon wafer. The ions are implanted beneath the surface of the silicon, altering

its electrical characteristics. The flow rates of the gases into the ion chamber and the pressure in the ion chamber must be precisely controlled to create and maintain the ion density required to achieve desired electrical characteristics.

The pressures used in semiconductor manufacturing processes range from as low as one trillionth of atmospheric pressure (10(-9) Torr) to as high as 200 times atmospheric pressure. The following table shows the wide range of pressures required for typical semiconductor manufacturing processes:

[This table graphically depicts, using graybars, the gas pressure ranges (10(-D)Torr to 152,000 Torr) used in various typical semiconductor process steps (Gas distribution, Atmosharic CVD, Sub-atmospheric CVD, Low Pressure CVD, Plasma Etching & Cleaning, PVD and Implant).]

[Chart]

Etching and deposition steps are repeated many times in the fabrication of a semiconductor device and require varying flow rates, pressures and gases. A typical process step uses from three to five different gases. The uptime, yield and throughput of the process depends on precise repeatable measurement and control of the specific gas pressure and flow rates, as well as the maintenance of the vacuum integrity of the process chamber and the prevention of wafer contamination from particles entering the chamber. Pressure variations of as little as one-hundred-thousandth of atmospheric pressure can change process yields significantly and errors in gas composition may impair device performance. Particle contamination can produce defects that significantly reduce device yields.

Trends in Semiconductor Manufacturing

The ability of semiconductor manufacturers to offer integrated circuits with greater functionality at higher speeds requires continuous improvements in semiconductor process equipment and process controls. The transition to smaller device geometries, such as .25 micron and smaller line-widths, may require shorter process steps and is also leading to the introduction of new materials such as copper and parylene for conductors and insulators which in turn require new technologies for delivery of gases and vapors to the process chamber. In addition, the introduction of advanced processes such as high density plasma is leading to a need for lower pressures, which are more difficult to measure and control than higher pressures. These trends, along with increased wafer sizes, which result in higher device value per wafer, are leading to the need for increased sophistication of semiconductor processing equipment, a heightened emphasis on uptime, yield and throughput and the need for more precise process controls. As a result, the design and performance of instruments that control pressure or the flow of gases, or analyze the mixture of gases, are becoming even more critical to the semiconductor manufacturing process.

At the same time, the accelerating pace of technological change and the increasing sophistication of semiconductor manufacturing equipment have led to an increase in the number of components and subsystems used in the semiconductor manufacturing process. To help address this increased

complexity, semiconductor equipment manufacturers are increasingly seeking to establish relationships with a smaller group of broad-based suppliers that provide (i) value-added, integrated component solutions that address multiple steps in the semiconductor manufacturing process, (ii) a worldwide sales and support infrastructure and (iii) advanced technological capabilities to meet their needs on a worldwide basis.

Mks Strategy

The Company's objective is to be the leading worldwide supplier of instruments and components used to measure, control, analyze and isolate gases in semiconductor and other advanced thin-film materials processing applications. The principal elements of the Company's strategy to achieve this objective are set forth below:

Extend Technology Leadership. The Company seeks to apply its expertise in vacuum, pressure and flow measurement and control technologies to develop advanced products that meet the critical gas-related process requirements of semiconductor and advanced thin-film materials manufacturers. The Company has introduced technological innovations including corrosion-resistant pressure and vacuum sensors, closed-loop low pressure and vacuum control systems, and transducer-configured residual gas analyzers. The Company has developed, and continues to develop, new products to address emerging industry trends such as the transition from the use of 200mm wafers to 300mm wafers and the shrinking of integrated circuit line-widths from .35 micron to .25 and .18 micron and smaller. The Company has developed and, continues to develop materials delivery systems for new classes of materials, such as copper and parylene, that are beginning to be used in small geometry manufacturing technologies. In addition, the Company has been a leader in making its products compatible with emerging digital network standards, such as DeviceNet, for enabling components used in semiconductor manufacturing processes to transmit self-diagnostic and other information on a digital host network while reducing system complexity and space requirements.

Offer Comprehensive Product Lines. The Company believes that it offers the widest range of pressure and vacuum measurement and control products serving the semiconductor industry. The Company offers a full line of products including pressure and flow measurement and control instrumentation products; vacuum gauges, valves and components; and gas analysis instruments. Since the development of its original Baratron laboratory-based instrument in 1961, the Company has continuously enhanced and expanded its product offerings in response to the evolving needs of its customers. In 1997, for example, the Company introduced various new products and enhancements to existing products, including the Micro Baratron instrument, a significantly smaller version of its pressure measurement product, and a new low vapor pressure material delivery system. The Company plans to introduce new products in 1998, including a line of mass flow calibrators and process monitoring hardware and software for residual gas analysis. The Company plans to continue to expand its product lines through both internal development and acquisitions of complementary businesses, products and technologies.

Build Upon Close Working Relationships with Customers. The Company has been focused on serving the needs of semiconductor device manufacturers and semiconductor equipment OEMs for over 20 years and has established long-term relationships with many of its customers. The Company works closely with its OEM customers on future generation designs to provide products that are tailored for their specific needs. The Company works with its customers at the pre-design and design stage to identify and respond to their requests for current and future generations of products. These close working relationships also allow the Company to understand and address the cost and performance expectations of its customers. The Company plans to enhance its relationships with its major customers and identify opportunities to develop similar relationships with additional semiconductor equipment OEMs and device manufacturers.

Pursue Applications in Related Markets. The Company is leveraging its accumulated expertise in the semiconductor industry by developing products for applications that employ production processes similar to semiconductor fabrication processes in their reliance upon gases and vacuum-based production technologies. Applications served by the Company outside the semiconductor industry include vacuum freeze-drying of pharmaceuticals and foods, sterilization of medical appliances, and applications that involve advanced thin-film manufacturing such as flat panel displays, magnetic and optical storage media, solar cells, fiber optic cables and optical coatings. The Company plans to continue to identify and develop products that address advanced materials processing applications where gas management plays a critical role.

Leverage Global Infrastructure. As semiconductor device manufacturers have become increasingly sensitive to the significant costs of system downtime, they have required that suppliers offer comprehensive local repair service and close customer support. Manufacturers require close support to enable them to repair, modify, upgrade and retrofit their equipment to improve yields and adapt to new materials or processes. To meet these market requirements, MKS maintains a worldwide sales and support organization with offices in 22 locations. The Company currently manufactures its products at nine facilities in the United States and abroad. The Company continues to devote significant resources to expand and maintain its worldwide production and service capabilities to meet the global demand for gas management instruments and components. The Company believes that the ability to manufacture reliable instruments and components in a cost-effective manner is critical to meet the demanding "just-in-time" delivery requirements of its OEM and end-user customers. In 1998, the Company plans to add manufacturing capabilities to its Austin, Texas and United Kingdom facilities and further equip its cleanroom facilities in Andover and Methuen, Massachusetts. The Company intends to open a sales and support facility in Singapore in 1998.

Products

MKS offers a full line of instruments and components that are used to measure, control, analyze and isolate gases in semiconductor and other advanced thin-film manufacturing processes. The Company supplies products in three principal areas: (i) pressure and flow measurement and control

instrumentation products; (ii) vacuum gauges, valves and components; and (iii) gas analysis instruments.

The following schematic shows where MKS products are used in a typical semiconductor manufacturing process.

[MANUFACTURING SCHEMATIC] 1. Ultraclean Mini-Baratron Pressure Transducer and Local Display Module 2. Automatic Pressure Controller/ Regulator 3. Thermal Mass Flow Controller or Pressure-based Mass Flow Controller 4. Gas Box Rate-of-Rise In-situ Calibrator 5. Control and Shut-off Valves 6. Direct Liquid Injection -- Controller 7. Direct Liquid Injection -- Micropump 8. Direct Liquid Injection -- Vaporizer 9. RGA Mass Spectrometer with Software 10. Baratron Pressure Switch 11. In Situ Diagnostics Access Valve 12. Baratron Pressure Transducer 13. Automatic Downstream valve Controller 14. Vacuum Foreline 15. In-line Valve 16. Convection Pirani Gauge 17. Throttle Valve 18. Cold Cathode High Vacuum Gauge or Hot Cathode High Vacuum Gauge 19. In-line Trap 20. Foreline/Exhaust Line Heaters [The schematic is the illustration of a typical process chamber, with numerous MKS products surrounding the chamber. The products are as those listed to the right of the schematic.]

Pressure and Flow Measurement and Control Instrumentation Products

The Company designs and manufactures a wide range of pressure and flow measurement and control instrumentation. Each product line consists of products which are designed for a variety of pressure and flow ranges and accuracies.

Baratron Pressure Measurement Products. The Company's Baratron pressure measurement products are high-resolution, variable capacitance pressure measurement instruments and consist of five product lines that range from high accuracy digital output instruments to simple electronic switches. These products are typically used to measure the pressure of the gases being distributed upstream of the process chamber, to measure process chamber pressure and to measure pressures between the process chamber and the pump. Baratron instruments measure pressures at ranges from two hundred times atmospheric pressure to 10(-6) Torr. The Company believes it offers the widest range of variable capacitance gas pressure measurement instruments in the semiconductor and advanced thin-film materials processing industries.

A key feature of Baratron instruments is that they measure pressure independent of gas composition, which is critical for precise pressure control of semiconductor processes that involve gas mixtures. In these processes, there is a need to control both pressure and gas mixture, but the pressure measurement instrument must measure only the pressure of the sum of the gases in the chamber, independent of gas composition. The Baratron line of instruments enables users to achieve a highly accurate and repeatable measurement of gas pressure. Pressure measurement, independent of gas

composition, is also useful in evacuation (removal of atmospheric gases) and backfilling (introduction of specific amounts of several gases) applications, such as fluorescent bulb manufacturing and gas laser fabrication.

The following table shows the Company's principal Baratron pressure measurement product lines:

Baratron Pressure Measurement Products

RANGES OF LIST PRICES	PRODUCT LINES	TYPICAL APPLICATIONS	DESCRIPTION
$ 2,125 - $6,125	High accuracy pressure and vacuum measurement instruments	CVD PVD Etch Pressure calibration	Instruments with built-in temperature stabilization features, for high accuracy and high temperature operation
$450 - $3,600	General purpose pressure and vacuum measurement instruments	CVD PVD Etch	Rugged instruments with and without built-in temperature stabilization features, for reliable, accurate, process measurement
$650 - $950	Ultra-clean high pressure and vacuum measurement instruments	Gas Distribution CVD Etch	Instruments with ultra- clean surfaces exposed to gas, for high purity applications
$625 - $1,700	General purpose "MINI" pressure and vacuum measurement instruments	CVD Etch	Small footprint instruments for accurate, general purpose process measurement
$375 - $650	Electronic switches ranging from atmosphere to vacuum	PVD CVD Etch	Economical, stable instrument providing "go/no-go" output for pressure trip-points and alarms

The Company's list prices for its Baratron measurement products vary depending upon accuracy, pressure range, operating temperature range, stability, resolution and gas purity specifications.

Pressure Control Products. The Company's pressure control products consist of analog and digital automatic pressure and vacuum control electronic instruments and valves. These products enable precise control of process pressure by electronically actuating valves which control the flow of gases in and out of the process chamber to minimize the difference between desired and actual pressure in the chamber. The electronic controllers vary from simple analog units with precise manual tuning capability to state-of-the-art self-tuning, digital signal processing controllers. The valve products vary from small gas inlet valves to large exhaust valves.

In most cases, the Company's Baratron pressure measurement instruments provide the pressure input to the pressure control device, providing the user with an integrated closed-loop pressure control system. The Company's pressure control products can also accept inputs from other measurement instruments, enabling the control of gas input or exhaust based on parameters other than pressure.

Pressure and Vacuum Control Products

RANGES OF LIST PRODUCT LINES	TYPICAL APPLICATIONS	DESCRIPTION	PRICES
Downstream automatic valve controllers	CVD Etch	Analog controllers, self- tuning digital controllers and displayless self-tuning controllers	$850 - $2,000
Downstream exhaust control throttle valves	CVD Etch	Non-sealing valves, sealing valves, high speed sealing valves, microprocessor-based smart throttle valves and vane-type valves	$ 1,250 - $8,200
Upstream or downstream automatic controllers	CVD Etch Implant Backside wafer cooling	Integrated sensor, valve and control electronics package	$ 1,400 - $3,000
Upstream control valves	Etch Implant Backside wafer cooling	Elastomer and all-metal- sealed valves	$450 - $1,500

The Company has recently introduced a line of integrated pressure controllers that combine the functions of its Baratron pressure measurement instrument, control electronics and valve into a three-inch footprint instrument which can be placed directly on a gas line to control pressure either upstream or downstream of the instrument. This addresses the need for smaller components, saving valuable clean room space.

Flow Measurement and Control Products. The Company's flow measurement products include gas, vapor and liquid flow measurement products based upon thermal conductivity, pressure and direct liquid injection technologies. The flow control products combine the flow measuring device with valve control elements based upon solenoid, piezo-electric and piston pump technologies. The products measure and control the mass flow rate of gases and vapors into the process chamber. The Company's broad product lines include products that allow the precise flow control of inert or corrosive gases, the control of low vapor pressure gases, and heated liquid source materials, and the control of delicate, advanced technology liquid sources and dissolved solid sources for next generation devices.

The Company's line of thermal-based mass flow controllers includes all-metal-sealed designs and ultra-clean designs for semiconductor applications and general purpose controllers for applications where all-metal-sealed construction is not required. The Company has also developed pressure-based mass flow controllers, based on Baratron pressure instrument measurement and control technology, which use flow restrictors in the gas line to transform pressure control into mass flow control.

Flow Measurement and Control Products

RANGES OF LIST PRODUCT LINES	TYPICAL APPLICATIONS	DESCRIPTION	PRICES
Direct liquid injection system	CVD	Pumps and vaporizes liquid metal and	$8,500 - $24,900

		dielectric precursers into process chamber	
Gas box rate of rise calibrator	In situ calibration of mass flow controllers	Measures pressure increase with time in a known volume	$7,500
Pressure-based vapor delivery systems	CVD	Measures and controls flow of low pressure vapors into chamber	$4,600 - $12,400
Pressure-based mass flow controllers	CVD Implant	Gas flow controller consisting of Baratron sensor, control valve, orifice, and electronics	$2,700
Ultra-clean all-metal-sealed thermal mass flow controllers	CVD PVD Etch	Gas flow controller consisting of sensor, control valve and electronics	$1,400 - $13,850
General purpose elastomer-sealed mass flow controllers	CVD Etch	Gas flow controller consisting of sensor, control valve and electronics	$875 - $2,000

Certain new materials required for the next generation of semiconductor devices are difficult to control using traditional thermal mass flow technology. To control these new materials, the Company has designed a direct liquid injection subsystem ("DLI") which pumps a precise volume of liquid into a vaporizer, which in turn supplies a controlled flow of vapor into the process chamber. The DLI pump and vaporizer are presently used principally for research and development applications for next generation semiconductor device conductors and insulators, such as copper and parylene.

The Company's flow measurement products also include an in situ calibration system which independently measures mass flow and compares this measurement to that of the process chamber mass flow controller. The demand for the Company's calibration system is driven by the increasingly stringent process control needs of the semiconductor industry and the need to reduce costly downtime resulting from stopping operations to address mass flow controller problems.

Vacuum Gauges, Valves and Components

The Company is a leading supplier of vacuum gauges, valves and components. The Company offers a wide range of vacuum instruments consisting of vacuum measurement sensors and associated power supply and readout units. These vacuum gauges measure phenomena that are related to the level of pressure in the process chamber and downstream of the process chamber between the chamber and the pump, but, unlike Baratron pressure measurement instruments, do not measure pressure directly. These gauges are used to measure vacuum at pressures lower than those measurable with a Baratron pressure measurement instrument or to measure vacuum in the Baratron pressure measurement instrument range where less accuracy is required. The Company's indirect pressure gauges use thermal conductivity and ionization gauge technologies to measure pressure from atmospheric pressure to 10(-9)Torr. The Company's Baratron pressure measurement instruments, together with its vacuum gauges are capable of measuring the full range of pressures used in semiconductor and other thin-film manufacturing processes from 200 times atmospheric pressure to 10(-9)Torr.

The Company also manufactures a wide range of vacuum gauge instruments in which the associated electronics are packaged with the vacuum sensor, reducing panel space and installation cost. The Company offers both analog and digital versions of these vacuum gauge transducers.

Vacuum Gauges, Valves and Component Products

PRODUCT LINES	TYPICAL APPLICATIONS	DESCRIPTION	RANGES OF LIST PRICES
Cold cathode and hot filament vacuum gauges	PVD Etch	Electronic gauges to measure pressure down to 10(-9) Torr	$600 - $6,200
Convection gauges	PVD CVD Etch	Electronic gauges to measure from atmosphere down to 10(-3) Torr	$200 - $725
Right-angle and in-line shut-off valves	PVD CVD Etch Implant	High vacuum rapid action poppet valves	$275 - $4,500
Vacuum traps	CVD Etch	Contaminant particle trap	$1,800 - $2,500
Other vacuum components	PVD CVD Etch Implant	Flanges, fittings and heated lines	$325 - $1,650

The Company's vacuum valves are used on the gas lines between the process chamber and the pump downstream of the process chamber for CVD, PVD, implant and etch processes. The Company's vacuum components consist of fittings, flanges, traps and heated lines that are used downstream from the process chamber to provide leak free connections and to prevent condensable materials from depositing particles near or back into the chamber. The manufacture of small geometry devices cannot tolerate contamination from atmospheric pressure or particles. The Company's vacuum components are designed to minimize such contamination and thus increase yields and uptimes.

Gas Analysis Instruments

The Company's gas analysis instruments are sold primarily to the semiconductor industry. The residual gas analysis product lines include a quadrapole mass spectrometer sensor with built-in electronics to analyze the composition of background and process gases in the process chamber. The Company's ORION process monitoring system is a sophisticated quadrapole mass spectrometer process analyzer for statistical process monitoring of manufacturing processes operating from very low pressures to atmospheric pressure. These instruments are provided both as portable laboratory systems and as process gas monitoring systems used in the diagnosis of semiconductor manufacturing process systems. The gas monitoring systems can indicate out- of-bounds conditions, such as the presence of undesirable atmospheric gases, water vapor or out-of-tolerance amounts of specific gases in the process chamber, enabling operators to diagnose and repair faulty equipment. The Company's gas sampling systems provide a turn-key solution for withdrawing gases from chambers at relatively high pressures for introduction into the low pressure gas analyzers. Next generation, smaller geometry

and larger wafer size device manufacturing processes are expected to require sophisticated gas analysis instruments and or monitoring equipment to ensure tighter process control and earlier diagnosis of equipment failures.

Markets and Applications

The Company estimates that approximately two-thirds of its sales in the first nine months of 1997 were made to the semiconductor industry. The Company's products are also used in other markets and applications including the manufacture of flat panel displays, magnetic and optical storage media, solar cells, fiber optic cables and optical coatings. The major markets for the Company's products include:

Semiconductor Manufacturing The Company's products are sold to semiconductor device manufacturers and semiconductor equipment OEMs. The Company's products are used in the major front-end process technologies such as PVD, CVD, etch and ion implantation and for process facility applications such as gas distribution, clean room pressure control and vacuum distribution. The Company anticipates that the semiconductor manufacturing market will continue to account for a substantial portion of its sales. While the semiconductor device manufacturing market is global, the major semiconductor equipment OEMs are concentrated in the U.S., Japan and Europe.

Flat Panel Display Manufacturing The Company's products are used in the manufacture of flat panel displays, which require the same or similar fabrication processes as semiconductor manufacturing. The dominant fabrication process is CVD, which uses the same or similar Company products as CVD for semiconductor manufacturing. The Company sells its products both to OEMs and to end-users in the flat panel display market. The transition to larger panel size and higher definition is driving the need for defect reduction which requires tighter process controls.

Magnetic and Optical Storage Media The Company's products are used in the manufacture of CD-ROMs, CDs, hard disks, and DVDs (digital video disks), typically in PVD applications. The Company's products are also used in the production of thin-film heads where ion beam technology is typically used. The transition to higher density storage capacity requires manufacturing processes incorporating tighter process controls. While storage media manufacturing is global, the major manufacturers are concentrated in Japan and the Asia-Pacific region and equipment OEMs are concentrated in the U.S., Japan and Europe.

Optical Fiber and Optical Coating The Company's products are used in optical fiber and optical coating film processes. The Company's products are sold both to coating equipment OEMs and to manufacturers of products made using optical thin-films processes. Optical fibers used for data transmission are manufactured using CVD processes similar to those used in semiconductor manufacturing. The requirement for greater data transmission is driving the need for tighter control of optical fiber coating processes. Optical thin films for eyeglasses, solar panels and architectural glass are deposited using evaporation, CVD or PVD in processes similar to those used in semiconductor manufacturing. Optical fiber manufacturing and optical thin-film processing are concentrated in the U.S., Japan and Europe.

Other Markets

The Company's pressure and flow measurement and control instruments are also used in CVD and PVD processes for the application of thin films to harden tool bit surfaces, in the production of diamond thin films, in plasma processes used to sterilize medical instruments, in vacuum freeze drying of pharmaceuticals, foods and beverages and in vacuum processes involved in light bulb and gas laser manufacturing. The major OEMs and manufacturers are concentrated in the U.S., Japan and Europe.

Customers

The Company has more than 4,000 active customers worldwide (having purchased products during the past year), including most major semiconductor device manufacturers, semiconductor equipment OEMs and industrial and research laboratories. The Company's largest customers consist primarily of leading semiconductor equipment OEMs and semiconductor device manufacturers, including Applied Materials, Eaton, Hitachi, Lam Research, TEL and ULVAC. In 1995 and 1996 and the first nine months of 1997, sales to the Company's top five customers accounted for approximately 24%, 26% and 31%, respectively, of the Company's net sales. During the same periods, international sales represented approximately 32%, 30% and 28% of total net sales, respectively. During the first nine months of 1997, Applied Materials accounted for approximately 21% of the Company's net sales. Applied Materials purchases products from the Company under the terms of an agreement, with no minimum purchase requirements, that expires in 2002.

Sales, Marketing and Support

The Company's worldwide sales, marketing and support organization is critical to its strategy of maintaining close relationships with semiconductor equipment OEMs and device manufacturers. The Company sells its products primarily through its direct sales force which consists of 134 employees in 22 offices in Canada, France, Germany, Japan, Korea, the Netherlands, the United Kingdom and the United States. This direct sales force is supplemented by sales representatives and agents in China, India, Israel, Italy, Singapore and Taiwan and in selected domestic cities. The Company maintains a marketing staff of 24 employees to identify customer requirements, assist in product planning and specifications and to focus on future trends in the semiconductor and other markets.

As semiconductor device manufacturers have become increasingly sensitive to the significant costs of system downtime they have required that suppliers offer comprehensive local repair service and close customer support. Manufacturers require close support to enable them to repair, modify, upgrade and retrofit their equipment to improve yields and adapt new materials or processes. To meet these market requirements, the Company maintains a worldwide sales and support organization with offices in 22 locations. Technical support is provided by applications engineers located at offices in Arizona, California, Colorado, Massachusetts, Oregon and Texas, as well as Canada, France, Germany, India, Israel, Italy, Japan, Korea, the Netherlands, Singapore, Taiwan and the United Kingdom. Repair and calibration services are provided at 14 service depots located both in the United States and abroad. The

Company provides warranties from one to three years, depending upon the type of product. In addition, the Company offers training programs for its customers in a wide range of vacuum and gas handling technologies.

Manufacturing

The Company believes that the ability to manufacture reliable gas management instruments and components in a cost-effective manner is critical to meeting the demanding requirements of its OEM and end-user customers. The Company monitors and analyzes product lead times, warranty data, process yields, supplier performance, field data on mean time between failures, inventory turns, repair response time and other indicators so that it may continuously improve its manufacturing processes. The Company has adopted a total quality management process. Certain of the Company's major manufacturing and service operations are ISO 9001 certified and the Company is planning to implement ISO 9000 for the remainder of its U.S. and European operations by the end of 1998.

The Company is devoting significant financial and management resources to maintain and expand its worldwide production and service capabilities to meet the global demand for gas management instruments and components. The Company believes that the ability to manufacture reliable instruments and components in a cost-effective manner is critical to meet the demanding "just-in-time" delivery requirements of its OEM and end-user customers. Due to the short time between the receipt of orders and shipments, the Company normally operates with a level of backlog that is not significant. The Company currently manufactures its products at nine facilities in the United States and abroad. The Company plans in 1998 to add manufacturing capabilities to its Austin, Texas and United Kingdom facilities and further equip its cleanroom facilities in Andover and Methuen, Massachusetts.

The Company's principal manufacturing activities consist of precision assembly, test, calibration, welding and machining activities. The Company subcontracts a portion of its assembly, machining and printed circuit board assembly and testing. All other assembly, test and calibration functions are performed by the Company. Critical assembly activities are performed in cleanroom environments at the Company's facilities.

Research and Development

The Company's research and development efforts are directed toward developing and improving the Company's gas management instruments and components for semiconductor and advanced thin-film processing applications and identifying and developing products for new applications for which gas management plays a critical role. The Company has undertaken an initiative to involve its marketing, engineering, manufacturing and sales personnel in the concurrent development of new products in order to reduce the time to market for new products. The Company's employees also work closely with its customers' development personnel. These relationships help the Company identify and define future technical needs on which to focus its research and development efforts. In addition, the Company participates in SEMI/SEMATECH, a consortium of semiconductor equipment suppliers, to

assist in product development and standardization of product technology, and it supports research at academic institutions targeted at advances in materials science and semiconductor process development.

As of September 30, 1997, the Company employed a research and development staff of 131 employees. In 1995, 1996 and the first nine months of 1997, the Company's research and development expenditures were approximately $10.9 million, $14.2 million and $10.3 million, respectively, representing approximately 7.0%, 8.3% and 7.7% of net sales.

Competition

The market for the Company's products is highly competitive. Principal competitive factors include historical customer relationships; product quality, performance and price; breadth of product line; manufacturing capabilities; and customer service and support. While the Company believes that it competes favorably with respect to these factors, there can be no assurance that it will continue to do so.

The Company encounters substantial competition in each of its product lines from a number of competitors, although no one competitor competes with the Company across all product lines. Certain of the Company's competitors have greater financial and other resources than the Company. In some cases, the competitors are smaller than the Company, but well established in specific product niches. Millipore offers products that compete with the Company's pressure and flow products. AERA, STEC and Unit Instruments each offer products that compete with the Company's mass flow control products. NOR-CAL and MDC each offer products that compete with the Company's vacuum components. Leybold-Inficon offers products that compete with the Company's vacuum measuring and gas analysis products. Spectra Instruments offers products that compete with the Company's gas analysis products. In some cases, particularly with respect to mass flow controllers, end-user semiconductor device manufacturers may direct semiconductor equipment OEMs to use a specified supplier's product in their equipment. Accordingly, the Company's success depends in part on its ability to have semiconductor device manufacturers specify that its products be used at their fabrication facilities and the Company may encounter difficulties in changing established relationships of competitors with a large installed base of products at such customers' fabrication facilities. In addition, the Company's competitors can be expected to continue to improve the design and performance of their products. There can be no assurance that competitors will not develop products that offer price or performance features superior to those of the Company's products.

Patents and Other Intellectual Property Rights

The Company relies on a combination of patent, copyright, trademark and trade secret laws and license agreements to establish and protect its proprietary rights. The Company has 37 U.S. patents and 22 U.S. patent applications pending. Foreign counterparts of certain of these applications have been filed or may be filed at the appropriate time. While the Company believes that certain patents may be

important for certain aspects of its business, the Company believes that its success depends more upon close customer contact, innovation, technological expertise, responsiveness and worldwide distribution.

The Company requires each of its employees, including its executive officers, to enter into standard agreements pursuant to which the employee agrees to keep confidential all proprietary information of the Company and to assign to the Company all inventions made while in the employ of the Company.

Employees

As of September 30, 1997, the Company employed 1,126 persons, including 711 in manufacturing, 131 in research and development, 284 in marketing, sales, support and general and administrative activities. Management believes that the Company's ongoing success depends upon its continued ability to attract and retain highly skilled employees.

Facilities

The Company's corporate headquarters are located in Andover, Massachusetts. Manufacturing and other operations are conducted in a number of locations worldwide. The following table provides information concerning the Company's principal owned and leased facilities:

LOCATION SQ. FT. ACTIVITY PRODUCTS MANUFACTURED

Andover, Massachusetts	82,000	Headquarters, Manufacturing, Customer Support and Research & Development	Baratron pressure measurement products
Boulder, Colorado	86,000	Manufacturing, Customer Support, Service and Research & Development	Vacuum gauges, valves and components
Methuen, Massachusetts	85,000	Manufacturing, Customer Support, Service and Research & Development	Pressure control and flow measurement and control products

Lawrence, Massachusetts 40,000 Manufacturing Baratron pressure measurement products

Tokyo, Japan	20,700	Manufacturing, Sales, Customer Support, Service and Research & Development	Mass flow measurement and control products
Walpole, Massachusetts	20,000	Manufacturing, Customer Support, Service and Research & Development	Gas analysis instruments
Munich, Germany	14,100	Manufacturing, Sales, Customer Support, Service and Research & Development	Mass flow measurement and control products

Le Bourget, France 13,700 Sales, Customer Support and Service Santa Clara, California 13,000 Sales, Customer Support and Service Richardson, Texas 11,000 Manufacturing, Sales, Customer Subassemblies Support and Service Austin, Texas 8,200 Sales, Customer Support and Service

Seoul, Korea	4,760	Manufacturing, Sales, Customer Support and Service	Mass flow measurement and control products

Liverpool, U.K. 2,500 Sales, Customer Support and Service Ottawa, Canada 2,095 Sales, Customer Support and Service

Legal Proceedings

The Company is not a party to any material legal proceedings.

Management

Executive Officers and Directors

The executive officers and directors of the Company as of October 31, 1997 are as follows:

Name Age Position

John R. Bertucci	56	Chairman of the Board of Directors, President and Chief Executive Officer
Ronald C. Weigner	52	Vice President and Chief Financial Officer
John J. Sullivan	62	Executive Vice President of Technology
William D. Stewart	53	President, HPS
Leo Berlinghieri	44	Vice President, Customer Support Operations
Richard S. Chute(1)	59	Director
Owen W. Robbins(2)	68	Director
Robert J. Therrien(1)	63	Director
Louis P. Valente(1)(2)	67	Director

(1) Member of Compensation Committee.

(2) Member of Audit Committee.

Mr. Bertucci has served as President of the Company since 1974 and has been Chief Executive Officer and Chairman of the Board of Directors since November 1995. From 1970 to 1974, he was Vice President and General Manager of the Company. Mr. Bertucci has an M.S. in Industrial Administration and a B.S. in Metallurgical Engineering from Carnegie-Mellon University. Mr. Bertucci is also a director of Applied Science and Technology Corporation.

Mr. Weigner has served as Vice President and Chief Financial Officer of the Company since November 1995. From September 1991 until November 1995, he was Vice President and Corporate Controller of the Company and from 1980 to 1993 he was Corporate Controller. Mr. Weigner is a certified public accountant and has a B.S. in Business Administration from Boston University.

Mr. Sullivan has served as Executive Vice President of Technology of the Company since March 1995. From 1982 to March 1995, Mr. Sullivan was Vice President of Marketing of the Company and from 1975 to 1982 he was Vice President of Sales and Marketing of the Company. Mr. Sullivan has an M.S.

and a B.S. in physics from Northeastern University.

Mr. Stewart has served as President of HPS, the Company's Vacuum Gauges, Valves and Components product group since the Company's acquisition of HPS Corporation in 1986. Mr. Stewart co-founded HPS in 1976. Mr. Stewart has an M.B.A. from Northwestern University and a B.S. in Business Administration from the University of Colorado. Mr. Stewart also serves on the Board of Directors of the Janus Fund.

Mr. Berlinghieri has served as Vice President of Customer Support Operations for the Company since November 1995. From 1980 to November 1995, Mr. Berlinghieri served in various management positions for the Company, including Manufacturing Manager, Production & Inventory Control Manager, and Director of Customer Support Operations. Mr. Berlinghieri is also Treasurer of the TQM-Base Council, Inc., (a non-profit quality management consortium comprised of Boston-area semiconductor and capital equipment manufacturers).

Mr. Chute has served as a director of the Company since 1974. Mr. Chute has been a member of the law firm of Hill & Barlow, a professional corporation, since November 1971.

Mr. Robbins has served as a director of the Company since February 1996. Mr. Robbins was Executive Vice President of Teradyne, Inc., a manufacturer of electronic test systems and backplane connection systems used in the electronics and telecommunications industries from March 1992 to May 1997, and its Chief Financial Officer from February 1980 to May 1997. Mr. Robbins has served on the Board of Directors of Teradyne since March 1992 and was Vice Chairman from January 1996 to May 1997.

Mr. Therrien has served as a director of the Company since February 1996. Mr. Therrien has been President and Chief Executive Officer of Brooks Automation, Inc., a manufacturer of semiconductor processing equipment, since 1989.

Mr. Valente has served as a director of the Company since February 1996. Mr. Valente was a Senior Vice President of Acquisitions, Mergers and Investments of EG&G, Inc. from 1991 until July 1995. Mr. Valente has been President and Chief Executive Officer of Palomar Medical Technologies, Inc. ("PMT"), a company which designs, manufactures and markets cosmetic lasers, from May 1997 to September 1997, its Chairman of the Board of Directors and Chief Executive Officer from September 1997 to present and a director of PMT since February 1997. Mr. Valente is also a director of Micrion Corporation.

Executive officers of the Company are elected by the Board of Directors on an annual basis and serve until their successors are duly elected and qualified. There are no family relationships among any of the executive officers of the Company.

Committees of the Board of Directors

The Compensation Committee consists of Messrs. Chute, Therrien and Valente. The Compensation Committee reviews and evaluates the salaries, supplemental compensation and benefits of all officers of the Company, reviews general policy matters relating to compensation and benefits of employees of

the Company and makes recommendations concerning these matters to the Board of Directors. The Compensation Committee also administers the Company's stock option and stock purchase plans. See "-- Stock Plans."

The Audit Committee consists of Messrs. Robbins and Valente. The Audit Committee reviews with the Company's independent auditors the scope and timing of their audit services, the auditor's report on the Company's financial statements following completion of their audit and the Company's policies and procedures with respect to internal accounting and financial controls. In addition, the Audit Committee will make annual recommendations to the Board of Directors for the appointment of independent auditors for the ensuing year.

Director Compensation

Directors of the Company are reimbursed for expenses incurred in connection with their attendance at Board and committee meetings. Directors who are not employees of the Company are paid an annual fee of $10,000 and $1,000 for each Board meeting they attend and $500 for each committee meeting they attend which is not held on the same day as a Board meeting. Messrs. Chute, Robbins, Therrien and Valente, the Company's four non-employee directors, have each been granted options, under the Company's 1996 Director Stock Option Plan, to purchase 5,125 shares of Common Stock at an exercise price of $6.64 per share and will be eligible for future grants under the Company's 1997 Director Stock Option Plan.

Compensation Committee Interlocks and Insider Participation

The Compensation Committee is currently comprised of Messrs. Chute, Therrien and Valente. No member of the Compensation Committee was at any time during the fiscal year ended December 31, 1996 or at any other time an employee of the Company. No executive officer of the Company serves as a member of the board of directors or compensation committee of any other entity which has one or more executive officers serving as a member of the Company's Board of Directors or Compensation Committee.

Executive Compensation

The following table sets forth information with respect to the compensation of the Company's Chief Executive Officer and each of the four other most highly compensated executive officers for the year ended December 31, 1996 (the "Named Executive Officers").

Summary Compensation Table

			LONG-TERM COMPENSATION		
	ANNUAL COMPENSATION		AWARDS		
NAME AND PRINCIPAL POSITION	SALARY	BONUS	OTHER ANNUAL COMPENSATION	SECURITIES UNDERLYING OPTIONS	ALL OTHER COMPENSATION(2)
John R. Bertucci.....	$319,712	--	--		$15,942
President and Chief Executive Officer					
Ronald C. Weigner.....	153,555	--	53,031	12,000	
Vice President and Chief Financial Officer					
John J. Sullivan.....	135,962	$ 30,959(1)	--	11,957	
Executive Vice President of Technology					
William D. Stewart.....	166,250	--	32,098	12,000	
President, HPS					
Leo Berlinghieri.....	121,755	--	30,338	7,500	
Vice President, Customer Support Operations					

(1) Includes a transportation allowance of $21,127.

(2) Includes a premium of $3,942 paid on a life insurance policy, and payments of $12,000 paid into a 401(k) plan for Mr. Bertucci and payments paid into a 401(k) plan for Messrs. Weigner, Sullivan, Stewart and Berlinghieri.

Option Grants

The following table contains information concerning the stock option grants made to each of the Named Executive Officers for the year ended December 31, 1996.

Option Grants in Last Fiscal Year

	INDIVIDUAL GRANTS				POTENTIAL REALIZABLE VALUE AT ASSUMED ANNUAL RATES OF STOCK PRICE APPRECIATION FOR OPTION TERM (2)	
NAME	NUMBER OF SECURITIES UNDERLYING OPTIONS GRANTED(1)	PERCENT OF TOTAL OPTIONS GRANTED TO EMPLOYEES IN FISCAL YEAR	EXERCISE OR BASE PRICE PER SHARE	EXPIRATION DATE	5%	10%
John R. Bertucci.....	--	--	--	--	--	--
Ronald C. Weigner.....	53,031	9.82%	$6.64	11/30/05	$200,965	$498,926
John J. Sullivan.....	--	--	--	--	--	--
William D. Stewart.....	32,098	5.94	6.64	11/30/05	121,642	301,994
Leo Berlinghieri.....	30,338	5.62	6.64	11/30/05	114,972	285,435

(1) These options become exercisable on a quarterly basis over a four year period.

(2) Amounts represent hypothetical gains that could be achieved for the respective options if exercised at the end of the option term. These gains are based on assumed rates of stock price appreciation of 5% and 10% compounded annually from the date the respective options were granted to their expiration date. These numbers are calculated based on rules promulgated by the Securities and Exchange Commission and do not reflect the Company's estimate of future stock price growth. Actual gains, if any, on stock option exercises and Common Stock are dependent on the timing of such exercise and the future performance of the Common Stock.

Option Exercises and Holdings

The following table sets forth information concerning option exercises and option holdings for the fiscal year ended December 31, 1996 with respect to each of the Named Executive Officers.

Aggregated Option Exercises in Last Fiscal Year and Year-end Option Values

NAME	NUMBER OF SHARES UNDERLYING UNEXERCISED OPTIONS AT YEAR-END		VALUE OF UNEXERCISED IN-THE-MONEY OPTIONS AT YEAR-END(1)	
	EXERCISABLE	UNEXERCISABLE	EXERCISABLE	UNEXERCISABLE
John R. Bertucci	--	--	--	--
Ronald C. Weigner	10,607	42,424	--	--
John J. Sullivan	--	--	--	--
William D. Stewart	6,420	25,678	--	--
Leo Berlinghieri	6,068	24,270	--	--

(1) Values are based on the difference between the fair market value of the underlying securities at December 31, 1996 ($6.64 per share) and the exercise price of each option listed (in each case, $6.64 per share).

In January 1997, the Company granted options to purchase 31,369, 52,302 and 54,062 shares of Common Stock to Messrs. Weigner, Stewart and Berlinghieri, respectively, at an exercise price of $6.64 per share.

Stock Plans

1995 Stock Incentive Plan The Company's Amended and Restated 1995 Stock Incentive Plan (the "1995 Stock Plan") provides for the grant of incentive stock options, nonstatutory stock options, stock appreciation rights, performance shares and awards of restricted stock and unrestricted stock

("Awards"). An aggregate of 2,500,000 shares of Common Stock may be issued pursuant to the 1995 Stock Plan (subject to adjustment for certain changes in the Company's capitalization). No Award may be made under the 1995 Stock Plan after November 30, 2005.

The 1995 Stock Plan is administered by the Board of Directors and the Compensation Committee. The Board has the authority to grant Awards under the 1995 Stock Plan and to accelerate, waive or amend certain provisions of outstanding Awards. The Board has authorized the Compensation Committee to administer certain aspects of the 1995 Stock Plan and has authorized the Chief Executive Officer of the Company to grant Awards to non-executive officer employees. The maximum number of shares represented by such Awards may not exceed 300,000 shares in the aggregate or 20,000 shares to any one employee.

Incentive Stock Options and Nonstatutory Options. Optionees receive the right to purchase a specified number of shares of Common Stock at some time in the future at an option price and subject to such terms and conditions as are specified at the time of the grant. Incentive Stock Options and options that the Board of Directors or Compensation Committee intends to qualify as performance-based compensation under Section 162(m) of the Code may not be granted at an exercise price less than the fair market value of the Common Stock on the date of grant (or less than 110% of the fair market value in the case of incentive stock options granted to optionees holding 10% or more of the voting stock of the Company). All other options may be granted at an exercise price that may be less than, equal to or greater than the fair market value of the Common Stock on the date of grant.

Stock Appreciation Rights and Performance Shares. A stock appreciation right ("SAR") is based on the value of Common Stock and entitles the SAR holder to receive consideration to the extent that the fair market value on the date of exercise of the shares of Common Stock underlying the SAR exceeds the fair market value of the underlying shares on the date the SAR was granted. A performance share award entitles the recipient to acquire shares of Common Stock upon the attainment of specified performance goals.

Restricted and Unrestricted Stock. Restricted stock awards entitle recipients to acquire shares of Common Stock, subject to the right of the Company to repurchase all or part of such shares at their purchase price from the recipient in the event that the conditions specified in the applicable stock award are not satisfied prior to the end of the applicable restriction period established for such award. The Company may also grant (or sell at a purchase price not less than 85% of the fair market value on the date of such sale) to participants shares of Common Stock free of any restrictions under the 1995 Stock Plan.

All of the employees, officers, directors, consultants and advisors of the Company and its subsidiaries who are expected to contribute to the Company's future growth and success are eligible to participate in the 1995 Stock Plan.

Section 162(m) of the Code disallows a tax deduction to public companies for certain compensation in excess of $1 million paid to a company's chief executive officer or to any of the four other most highly compensated executive officers. Certain compensation, including "performance-based compensation," is not included in compensation subject to the $1 million limitation. The 1995 Stock Plan limits to

900,000 the maximum number of shares of Common Stock with respect to which Awards may be granted to any employee in any calendar year. This limitation is intended to preserve the tax deductions to the Company that might otherwise be unavailable under Section 162(m) with respect to certain Awards.

Prior to the date of this Prospectus, the Company plans to grant options (to vest 20% after one year and 5% per quarter thereafter) to purchase approximately 350,000 shares of Common Stock to employees of the Company, at an exercise price equal to the initial public offering price.

1997 Employee Stock Purchase Plan The Company's 1997 Employee Stock Purchase Plan (the "Purchase Plan") authorizes the issuance of up to an aggregate of 300,000 shares of Common Stock to participating employees. The Company will make one or more offerings ("Offerings") to employees to purchase Common Stock under the Purchase Plan. Offerings under the Purchase Plan commence on June 1 and December 1 and terminate, respectively on November 30 and May 31. During each Offering, the maximum number of shares which may be purchased by a participating employee is determined on the first day of the Offering period under a formula whereby 85% of the market value of a share of Common Stock on the first day of the Offering period is divided into an amount equal to 10% of the employee's annualized compensation (or such lower percentage as may be established by the Compensation Committee) for the immediately preceding six-month period. An employee may elect to have up to 10% deducted from his or her regular salary (or such lower percentage as may be established by the Compensation Committee) for this purpose. The price at which an employee's option is exercised is the lower of (i) 85% of the closing price of the Common Stock on the Nasdaq National Market on the day that the Offering commences or (ii) 85% of the closing price on the day that the Offering terminates.

The Purchase Plan is administered by the Board of Directors and the Compensation Committee. With certain exceptions, all eligible employees, including directors and officers, regularly employed by the Company for at least six months on the applicable Offering commencement date are eligible to participate in the Purchase Plan. The Purchase Plan is intended to qualify as an "employee stock purchase plan" as defined in Section 423 of the Code.

1997 Director Stock Option Plan The Company's 1997 Director Stock Option Plan (the "1997 Director Plan") authorizes the issuance of up to an aggregate of 200,000 shares of Common Stock. The 1997 Director Plan is administered by the Company's Board of Directors. Options are granted under the 1997 Director Plan only to directors of the Company who are not employees of the Company ("eligible directors"). Under the 1997 Director Plan, prior to the date of this Prospectus each existing eligible director will receive an option to purchase 7,000 shares of Common Stock at an exercise price equal to the initial public offering price and future non-employee directors will receive an option to purchase 7,500 shares of Common Stock upon their initial election to the Board of Directors ("Initial Options"). Each Initial Option shall vest in twelve equal quarterly installments following the date of grant. On the date of each annual meeting of the stockholders, options will be automatically granted to each eligible director then in office ("Annual Options"). Each Annual Option will entitle the holder to purchase 4,000 shares of Common Stock. Each Annual Option will become exercisable on the day prior to the

first annual meeting of stockholders following the date of grant (or if no such meeting is held within 13 months after the date of grant, on the 13-month anniversary of the date of grant). The exercise price of all options granted under the 1997 Director Plan is equal to the fair market value of the Common Stock on the date of grant. Options granted under the 1997 Director Plan terminate upon the earlier of three months after the optionee ceases to be a director of the Company or ten years after the grant date. In the event of a Change in Control (as defined in the 1997 Director Plan), the vesting of all options then outstanding would be accelerated in full and any restrictions on exercising outstanding options would terminate.

The Company's 1996 Director Stock Option Plan, under which options have been granted to four non-employee directors of the Company, has been terminated. See "-- Director Compensation."

Certain Transactions

Mr. Chute a director of the Company, the Company's Clerk, and a co-trustee of certain of the Bertucci Family Trusts (See "Principal Stockholders") and Mr. Thomas H. Belknap, a co-trustee of certain of the Bertucci Family Trusts, are attorneys at the law firm of Hill & Barlow, a professional corporation. Hill & Barlow has provided legal services to the Company during the fiscal year ended December 31, 1996 for which it was compensated by the Company in the aggregate amount of $189,000.

Mr. Stewart, the President of HPS, is the general partner of Aspen Industrial Park Partnership ("Aspen"). On October 12, 1989 the Company entered into a lease with Aspen for certain facilities occupied by the Company's Vacuum Gauges, Valves and Components product group in Boulder, Colorado. The Company pays Aspen approximately $342,000 annually to lease such facilities.

Effective July 1, 1987, the Company elected to be treated as an S corporation for federal income tax purposes. As a result, the Company currently pays no federal, and certain state, income tax and all of the earnings of the Company are subject to federal, and certain state, income taxation directly at the stockholder level. The Company's S corporation status will terminate upon the closing of this offering, at which time the Company will become subject to corporate income taxation under Subchapter C of the Code. In 1996 and in the first nine months of 1997, the Company distributed $14.5 million and $6.4 million, respectively, of undistributed S corporation earnings to its stockholders. The Company expects to make additional distributions of approximately $5.5 million prior to the closing of this offering. As soon as practicable following the closing of the offering, the Company intends to make a distribution to the holders of record on the day prior to the closing of this offering in an amount equivalent to the AA Account. As of September 30, 1997, the outstanding balance of the AA Account was approximately $30.2 million and such balance is expected to increase in the period from October 1, 1997 through the closing of the offering. See "S Corporation And Termination of S Corporation Status."

Principal Stockholders

The following table sets forth certain information regarding beneficial ownership of the Company's Common Stock as of September 30, 1997, and as adjusted to reflect the sale of shares offered hereby, by (i) each of the directors of the Company, (ii) each of the Named Executive Officers, (iii) each person or entity known to the Company to own beneficially more than 5% of the Company's Common Stock and (iv) all directors and executive officers as a group. Except as indicated below, none of these entities has a relationship with the Company or, to the knowledge of the Company, any Underwriters of this offering or their respective affiliates. Unless otherwise indicated, each person or entity named in the table has sole voting power and investment power (or shares such power with his or her spouse) with respect to all shares of capital stock listed as owned by such person or entity.

	NUMBER SHARES BENEFICIALLY	PERCENTAGE OF COMMON STOCK OUTSTANDING(1)(2)	
NAME OF BENEFICIAL OWNER	OWNED(1)	BEFORE OFFERING	AFTER OFFERING
John R. Bertucci(3)	11,507,940	95.62%	71.77%
Ronald C. Weigner(4)	29,540	*	*
John J. Sullivan(5)	409,340	3.40	2.55
William D. Stewart(4)	29,540	*	*
Leo Berlinghieri(4)	29,540	*	*
Richard S. Chute(6)	1,430,731	11.89	8.92
Owen W. Robbins(4)	2,261	*	*
Robert J. Therrien(4)	2,261	*	*
Louis P. Valente(4)	2,261	*	*
Thomas H. Belknap(7)	1,280,770	10.64	7.99
All executive officers and directors as a group	12,014,944	99.03%	74.47%

* Less than 1% of outstanding Common Stock.

(1) The number of shares beneficially owned by each stockholder is determined under rules promulgated by the Securities and Exchange Commission and the information is not necessarily indicative of beneficial ownership for any other purpose. Under such rules, beneficial ownership includes any shares as to which the individual has sole or shared voting power or investment power and also any shares which the individual has the right to acquire within 60 days of September 30, 1997 through the exercise of any stock option or other right. The inclusion herein of such shares, however, does not constitute an admission that the named stockholder is a direct or indirect beneficial owner of such shares.

(2) Assumes no exercise of the Underwriters' over-allotment option.

(3) Includes 4,441,550 shares held directly by Mr. Bertucci, 4,357,150 shares held directly by Mrs. Claire R. Bertucci, wife of Mr. Bertucci, and 2,709,240 shares held by trusts (collectively, the "Bertucci Family Trusts") for which either Mr. or Mrs. Bertucci serves as a co-trustee.

(4) Comprised solely of options exercisable within 60 days of September 30, 1997.

(5) Includes 211,000 shares held in a grantor retained annuity trust.

(6) Includes 1,428,470 shares held by certain of the Bertucci Family Trusts for which Mr. Chute serves as a co-trustee and 2,261 shares subject to options held by Mr. Chute exercisable within 60 days of September 30, 1997.

(7) Represents shares held by certain of the Bertucci Family Trusts for which Mr. Belknap serves as a co-trustee.

Description of Capital Stock

The authorized capital stock of the Company consists of 50,000,000 shares of Common Stock, no par value per share, and 2,000,000 shares of Preferred Stock, $.01 par value per share, after giving effect to the amendment and restatement of the Company's Restated Articles of Organization (the "Articles of Organization") which will be filed with the Secretary of State of The Commonwealth of Massachusetts prior to the closing of this offering.

Common Stock

As of September 30, 1997, there were 12,035,440 shares of Common Stock outstanding and held of record by seventeen stockholders, after giving effect to a 2,110-for-1 stock split, to be effected prior to the closing of this offering, of shares of Class A Common Stock and Class B Common Stock and the conversion of such shares into shares of Common Stock upon the closing of this offering.

Upon the closing of this offering, all holders of Common Stock shall be entitled to one vote for each share held on all matters submitted to a vote of stockholders and will not have cumulative voting rights. Accordingly, holders of a majority of the shares of Common Stock entitled to vote in any election of directors may elect all of the directors standing for election. Holders of Common Stock are entitled to receive ratably such dividends, if any, as may be declared by the Board of Directors out of funds legally available therefor, subject to any preferential dividend rights of outstanding Preferred Stock. Upon the liquidation, dissolution or winding up of the Company, the holders of Common Stock are entitled to receive ratably the net assets of the Company available after the payment of all debts and other liabilities, subject to the prior rights of any outstanding Preferred Stock. Holders of the Common Stock have no preemptive, subscription, redemption or conversion rights. The outstanding shares of Common Stock are, and the shares offered by the Company in the offering made by this Prospectus will be, when issued and paid for, fully paid and nonassessable. The rights, preferences and privileges of holders of Common Stock are subject to, and may be adversely affected by, the rights of the holders of shares of any series of Preferred Stock that the Company may designate and issue in the future. There are no shares of Preferred Stock outstanding.

Preferred Stock

The Articles of Organization authorize the Board of Directors, subject to certain limitations prescribed by law, without further stockholder approval, from time to time to issue up to an aggregate of 2,000,000 shares of Preferred Stock in one or more series and to fix or alter the designations, preferences and rights, and any qualifications, limitations or restrictions thereof, of the shares of each such series, including the number of shares constituting any such series and the dividend rights, dividend rates, conversion rights, voting rights, terms of redemption (including sinking fund provisions), redemption price or prices and liquidation preferences thereof. The issuance of Preferred Stock may have the effect of delaying, deferring or preventing a change in control of the Company. The Company has no present plans to issue any shares of Preferred Stock.

MASSACHUSETTS LAW AND CERTAIN PROVISIONS OF THE COMPANY'S RESTATED ARTICLES OF ORGANIZATION AND BY-LAWS The Company intends to amend and restate its bylaws (the "By-Laws") prior to the closing of the offering. The By-Laws will include a provision excluding the Company from the applicability of Massachusetts General Laws Chapter 110D, entitled "Regulation of Control Share Acquisitions." In general, this statute provides that any stockholder of a corporation subject to this statute who acquires 20% or more of the outstanding voting stock of a corporation may not vote such stock unless the stockholders of the corporation so authorize. The Board of Directors will be able to amend the By-Laws at any time to subject the Company to this statute prospectively.

Massachusetts General Laws Chapter 156B, Section 50A generally requires that publicly-held Massachusetts corporations have a classified board of directors consisting of three classes as nearly equal in size as possible, unless the corporation elects to opt out of the statute's coverage. The By-Laws, will contain provisions which give effect to Section 50A.

The By-Laws will require that nominations for the Board of Directors made by a stockholder of a planned nomination must be given not less than 30 and not more than 90 days prior to a scheduled meeting, provided that if less than 40 days' notice is given of the date of the meeting, a stockholder will have ten days within which to give such notice. The stockholder's notice of nomination must include particular information about the stockholder, the nominee and any beneficial owner on whose behalf the nomination is made. The Company may require any proposed nominee to provide such additional information as is reasonably required to determine the eligibility of the proposed nominee.

The By-Laws will also require that a stockholder seeking to have any business conducted at a meeting of stockholders give notice to the Company not less than 60 and not more than 90 days prior to the scheduled meeting, provided in certain circumstances that a ten-day notice rule applies. The notice from the stockholder will be required to describe the proposed business to be brought before the meeting and include information about the stockholder making the proposal, any beneficial owner on whose behalf the proposal is made, and any other stockholder known to be supporting the proposal. The By-Laws will require the Company to call a special stockholders meeting at the request of stockholders holding at least 40% of the voting power of the Company.

The Articles of Organization will provide that the directors and officers of the Company shall be indemnified by the Company to the fullest extent authorized by Massachusetts law, as it now exists or may in the future be amended, against all expenses and liabilities reasonably incurred in connection with service for or on behalf of the Company. In addition, the Articles of Organization will provide that the directors of the Company will not be personally liable for monetary damages to the Company for breaches of their fiduciary duty as directors, unless they violated their duty of loyalty to the Company or its stockholders, acted in bad faith, knowingly or intentionally violated the law, authorized illegal dividends or redemptions or derived an improper personal benefit from their action as directors.

The Articles of Organization will provide that any amendment to the Articles of Organization, the sale, lease or exchange of all or substantially all of the Company's property and assets, or the merger or consolidation of the Company into or with any corporation may be authorized by the approval of the holders of a majority of the shares of each class of stock entitled to vote thereon, rather than by two-thirds as otherwise provided by statute, provided that the transactions have been authorized by a majority of the members of the Board of Directors and the requirements of any other applicable provisions of the Articles of Organization have been met.

Transfer Agent and Registrar

The Transfer Agent and Registrar for the Common Stock is Boston EquiServe LP.

Shares Eligible for Future Sale

Prior to this offering, there has been no public market for the securities of the Company. Upon completion of this offering, based upon the number of shares outstanding at September 30, 1997, there will be 16,035,440 shares of Common Stock of the Company outstanding (assuming no exercise of the Underwriters' over-allotment option or options outstanding under the Company's stock option plans). Of these shares, the 4,000,000 shares sold in this offering will be freely tradeable without restriction or further registration under the Securities Act of 1933, as amended (the "Securities Act"), except that any shares purchased by "affiliates" of the Company, as that term is defined in Rule 144 ("Rule 144") under the Securities Act ("Affiliates"), may generally only be sold in compliance with the limitations of Rule 144 described below.

Sales of Restricted Shares

The remaining 12,035,440 shares of Common Stock are deemed "restricted securities" under Rule 144. All of these shares are subject to 180-day lock-up agreements (the "Lock-Up Agreements") with the Representatives of the Underwriters. Upon expiration of the Lock-Up Agreements 180 days after the date of this Prospectus (and assuming no exercise of any outstanding options), all such shares will be available for sale in the public market, subject to the provisions of Rule 144 under the Securities Act.

Stockholders who are parties to the Lock-Up Agreement have agreed that for a period of 180 days after the date of this Prospectus, they will not sell, offer, contract or grant any option to sell, pledge, transfer, establish an open put equivalent position or otherwise dispose of any shares of Common Stock, any options to purchase shares of Common Stock or any shares convertible into or exchangeable for shares of Common Stock, owned directly by such persons or with respect to which they have the power of disposition, without the prior written consent of NationsBanc Montgomery Securities, Inc.

In general, Rule 144 as currently in effect, beginning 90 days after the effective date of the Registration Statement of which this Prospectus is a part, a stockholder, including an Affiliate, who has beneficially owned his or her restricted securities (as that term is defined in Rule 144) for at least one year from the later of the date such securities were acquired from the Company or (if applicable) the date they were acquired from an Affiliate is entitled to sell, within any three-month period, a number of such shares that does not exceed the greater of 1% of the then outstanding shares of Common Stock (160,354 shares immediately after this offering) or the average weekly trading volume in the Common Stock during the four calendar weeks preceding the date on which notice of such sale was filed under Rule 144, provided certain requirements concerning availability of public information, manner of sale and notice of sale are satisfied. In addition, under Rule 144(k), if a period of at least two years has elapsed between the later of the date restricted securities were acquired from the Company or (if applicable) the date they were acquired from an Affiliate of the Company, a stockholder who is not an Affiliate of the Company at the time of sale and has not been an Affiliate of the Company for at least three months prior to the sale is entitled to sell the shares immediately without compliance with the foregoing requirements under Rule 144.

Securities issued in reliance on Rule 701 (such as shares of Common Stock acquired pursuant to the exercise of certain options granted under the Company's stock plans) are also restricted and, beginning 90 days after the effective date of the Registration Statement of which this Prospectus is a part, may be sold by stockholders other than Affiliates of the Company subject only to the manner of sale provisions of Rule 144 and by Affiliates under Rule 144 without compliance with its one-year holding period requirement.

Options

The Company has granted options to purchase an aggregate of 1,042,361 shares of which options to purchase an aggregate of 282,516 were exercisable as of September 30, 1997. Of these, [ ] shares were subject to the Lock-Up Agreements. The Company intends to file registration statements on Form S-8 under the Securities Act to register all shares of Common Stock issuable under each of the 1995 Stock Plan, Purchase Plan and the 1997 Director Plan promptly following the consummation of this offering. Shares issued pursuant to such plans shall be, after the effective date of the Form S-8 registration statements, eligible for resale in the public market without restriction, subject to Rule 144 limitations applicable to Affiliates and the Lock-up Agreements noted above, if applicable.

Underwriting

The underwriters named below (the "Underwriters"), represented by NationsBanc Montgomery Securities, Inc., Donaldson, Lufkin & Jenrette Securities Corporation and PaineWebber Incorporated (the "Representatives"), have severally agreed, subject to the terms and conditions set forth in the Underwriting Agreement, to purchase from the Company the number of shares of Common Stock indicated below opposite their respective names at the initial public offering price less the underwriting discount set forth on the cover page of this Prospectus. The Underwriting Agreement provides that the obligations of the Underwriters are subject to certain terms and conditions precedent and that the Underwriters are committed to purchase all of such shares, if any are purchased.

Number of Underwriter Shares

NationsBanc Montgomery Securities, Inc. ..... Donaldson, Lufkin & Jenrette Securities Corporation..... PaineWebber Incorporated..... Total..... 4,000,000 The Representatives have advised the Company that the Underwriters initially propose to offer the Common Stock to the public on the terms set forth on the cover page of this Prospectus. The Underwriters may allow to selected dealers a concession of not more than $ per share, and the Underwriters may allow, and any other dealers may reallow, a concession of not more than $ per share to certain other dealers. After the initial public offering, the offering price and other selling terms may be changed by the Representatives. The Common Stock is offered subject to receipt and acceptance by the Underwriters and to certain other conditions, including the right to reject orders in whole or in part.

The Company has granted an option to the Underwriters, exercisable during the 30-day period after the date of this Prospectus, to purchase up to a maximum of 600,000 additional shares of Common Stock to cover over-allotments, if any, at the same price per share as the initial shares to be purchased by the Underwriters. To the extent the Underwriters exercise this option, each of the Underwriters will be committed, subject to certain conditions, to purchase such additional shares in approximately the same proportion as set forth in the above table. The Underwriters may purchase such shares only to cover overallotments made in connection with this offering.

All stockholders prior to this offering, as well as certain holders of options to purchase Common Stock, have agreed not to directly or indirectly sell, offer, contract or grant any option to sell, pledge, transfer, establish an open put equivalent position or otherwise dispose of any rights with respect to any shares of Common Stock, any options or warrants to purchase Common Stock, or any securities convertible or exchangeable for Common Stock, owned directly by such holders or with respect to which they have the power of disposition for a period of 180 days after the period of this Prospectus without the prior written consent of NationsBanc Montgomery Securities, Inc. NationsBanc Montgomery Securities, Inc. may, in its sole discretion and at any time without notice, release all or any portion of the securities subject to these lock-up agreements. In addition, the Company has agreed not to sell, offer to sell, contract to sell or otherwise sell or dispose of any shares of Common Stock or any rights to acquire

Common Stock, other than pursuant to its stock plans or upon the exercise of outstanding options, for a period of 180 days after the date of this Prospectus without the prior consent of NationsBanc Montgomery Securities, Inc. See "Shares Eligible for Future Sale."

The Underwriting Agreement provides that the Company will indemnify the Underwriters against certain liabilities, including civil liabilities, under the Securities Act, or will contribute to payments the Underwriters may be required to make in respect thereof.

In connection with this offering, the Underwriters may engage in transactions that stabilize, maintain or otherwise affect the price of the Common Stock, including over-allotment, stabilization, syndicate covering transactions and imposition of penalty bids. In an over-allotment, the Underwriters would allot more shares of Common Stock to their customers in the aggregate than are available for purchase by the Underwriters under the Underwriting Agreement. Stabilizing means the placing of any bid, or the effecting of any purchase, for the purpose of pegging, fixing or maintaining the price of a security. In a syndicate covering transaction, the Underwriters would place a bid or effect a purchase to reduce a short position created in connection with this offering. Pursuant to a penalty bid, NationsBanc Montgomery Securities, Inc. on behalf of the Underwriters, would be able to reclaim a selling concession from an Underwriter if shares of Common Stock originally sold by such Underwriter are purchased in syndicate covering transactions. These transactions may result in the price of the Common Stock being higher than the price that might otherwise prevail in the open market. These transactions may be effected on the Nasdaq National Market, in the over-the-counter market or otherwise, and, if commenced, may be discontinued at any time.

The Representatives have informed the Company that they do not expect to make sales to accounts over which they exercise discretionary authority in excess of 5% of the number of shares of Common Stock offered hereby.

Prior to this offering, there has been no public market for the Common Stock of the Company. Consequently, the initial public offering price has been determined through negotiations among the Company and the Representatives. Among the factors considered in such negotiations were the history of, and prospects for, the Company and the industry in which it competes, an assessment of the Company's management, the present state of the Company's development, the prospects for future earnings of the Company, the prevailing market conditions at the time of this offering, market valuations of publicly traded companies that the Company and the Representatives believe to be comparable to the Company, and other factors deemed relevant.

Legal Matters

The validity of the Common Stock offered hereby will be passed upon for the Company by Hale and Dorr LLP, Boston, Massachusetts. Certain legal matters in connection with this offering will be passed upon for the Underwriters by Ropes & Gray, Boston, Massachusetts.

Experts

The consolidated balance sheets of MKS Instruments, Inc. as of December 31, 1995, 1996 and September 30, 1997 and the consolidated statements of income, stockholders' equity and cash flows for each of the three years in the period ended December 31, 1996 and for the nine month period ended September 30, 1997 included in this Prospectus have been included herein in reliance on the report of Coopers & Lybrand L.L.P., independent accountants, given upon the authority of that firm as experts in accounting and auditing.

Additional Information

The Company has filed with the Commission a Registration Statement (which term shall include all amendments, exhibits, schedules and supplements thereto) on Form S-1 under the Securities Act with respect to the shares of Common Stock offered hereby. This Prospectus, which constitutes a part of the Registration Statement, does not contain all of the information set forth in the Registration Statement, certain parts of which are omitted in accordance with the rules and regulations of the Commission, to which Registration Statement reference is hereby made. Statements made in this Prospectus as to the contents of any contract, agreement or other document referred to are not necessarily complete. With respect to each such contract, agreement or other document filed as an exhibit to the Registration Statement, reference is made to the exhibit for a more complete description of the matter involved, and each such statement shall be deemed qualified in its entirety by such reference. The Registration Statement and the exhibits thereto may be inspected and copied at prescribed rates at the public reference facilities maintained by the Commission at Room 1024, Judiciary Plaza, 450 Fifth Street, N.W., Washington, D.C. 20549 and at the regional offices of the Commission located at Seven World Trade Center, 13th Floor, New York, New York 10048 and 500 West Madison Street, Suite 1400, Chicago, Illinois 60661. In addition, the Company is required to file electronic versions to these documents with the Commission through the Commission's Electronic Data Gathering, Analysis, and Retrieval (EDGAR) system. The Commission maintains a World Wide Web site at http://www.sec.gov that contains reports, proxy and information statements and other information regarding registrants that file electronically with the Commission.

The Company intends to distribute to its stockholders annual reports containing audited consolidated financial statements. The Company also intends to make available to its stockholders, within 45 days after the end of each fiscal quarter, reports for the first three quarters of each fiscal year containing interim unaudited financial information.

Mks Instruments, Inc.

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Coopers & Lybrand L.l.p.

Report of Independent Accountants

To the Board of Directors and Stockholders of MKS Instruments, Inc.:

We have audited the accompanying consolidated balance sheets of MKS Instruments, Inc. as of December 31, 1995 and 1996, and September 30, 1997, and the related consolidated statements of income, stockholders' equity, and cash flows for the years ended December 31, 1994, 1995 and 1996, and the nine month period ended September 30, 1997. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

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

In our opinion, the financial statements referred to above present fairly, in all material respects, the consolidated financial position of MKS Instruments, Inc. as of December 31, 1995 and 1996, and September 30, 1997, and the consolidated results of its operations and its cash flows for the years ended December 31, 1994, 1995 and 1996, and the nine month period ended September 30, 1997, in conformity with generally accepted accounting principles.

Boston, Massachusetts October 28, 1997

Mks Instruments, Inc.

Consolidated Balance Sheets (In Thousands, Except Share Data)

	DECEMBER 31,		SEPTEMBER 30, 1997	
	1995	1996	ACTUAL	PRO FORMA (NOTE 2) (UNAUDITED)
ASSETS				
Current assets:				
Cash and cash equivalents	$ 3,650	$ 3,815	$ 5,421	$ 5,421
Marketable equity securities	563	391	918	918
Trade accounts receivable, net of allowance for doubtful accounts of $542 and $482 at December 31, 1995 and 1996, respectively, and $618 at September 30, 1997	28,804	21,734	32,018	32,018
Inventories	29,960	25,500	28,081	28,081
Deferred tax asset	348	513	658	658
Other current assets	3,755	541	462	462
Total current assets	67,080	52,494	67,558	67,558
Property, plant and equipment, net	33,210	38,007	34,343	34,343
Other assets	4,221	4,499	4,784	4,784
Total assets	$104,511	$95,000	$106,685	$ 106,685
LIABILITIES AND STOCKHOLDERS' EQUITY				
Current liabilities:				
Short-term borrowings	$ 12,264	$12,825	$ 13,171	$ 13,171
Current portion of long-term debt	2,203	2,258	2,153	2,153
Current portion of capital lease obligations	725	1,041	1,048	1,048
Accounts payable	8,895	4,776	7,999	7,999
Accrued compensation	5,133	5,115	7,597	7,597
Other accrued expenses	5,372	3,466	5,228	5,228
Income taxes payable	286	609	883	883
Distribution payable	--	--	--	30,183
Total current liabilities	34,878	30,090	38,079	68,262
Long-term debt	18,617	16,278	14,436	14,436
Long-term portion of capital lease obligations	1,845	2,621	1,912	1,912
Deferred tax liability	214	109	126	126
Other liabilities	565	404	376	376
Commitments and contingencies (Note 7)				
Stockholders' equity:				
Preferred stock, $.01 par value; 2,000,000 shares authorized, no shares issued or outstanding	--	--	--	--
Common Stock, Class A, no par value;				

25,000,000 shares authorized, 5,177,940 issued and outstanding	40	40	40	40
Common Stock, Class B (non voting) no par value; 25,000,000 shares authorized, 6,857,500 issued and outstanding	73	73	73	73
Additional paid-in capital	48	48	48	48
Unrealized gain on investments	246	115	562	562
Retained earnings	45,550	43,553	50,045	19,862
Cumulative translation adjustment	2,435	1,669	988	988
Total stockholders' equity	48,392	45,498	51,756	21,573
Total liabilities and stockholders' equity	$104,511	$95,000	$106,685	$ 106,685

The accompanying notes are an integral part of the consolidated financial statements.

Mks Instruments, Inc.

Consolidated Statements of Income (In Thousands, Except Per Share Data)

	YEAR ENDED DECEMBER 31,			NINE MONTHS ENDED SEPTEMBER 30,	
	1994	1995	1996	1996 (UNAUDITED)	1997
Net sales	$106,829	$157,164	$ 170,862	$ 136,097	$ 134,629
Cost of sales	59,813	87,703	102,008	81,078	78,456
Gross profit	47,016	69,461	68,854	55,019	56,173
Research and development	8,036	10,935	14,195	11,220	10,336
Selling, general and administrative	26,893	34,420	37,191	29,409	30,749
Restructuring	--	--	1,400	1,400	--
Income from operations	12,087	24,106	16,068	12,990	15,088
Interest expense	1,330	1,576	2,378	1,963	1,610
Interest income	46	128	92	152	144
Other income (expense), net	--	--	(479)	(230)	460
Income before income taxes	10,803	22,658	13,303	10,949	14,082
Provision for income taxes	800	1,000	800	658	1,190
Net income	$ 10,003	$ 21,658	$ 12,503	$ 10,291	$ 12,892
Pro forma data (unaudited):					
Historical income before income taxes			$ 13,303		$ 14,082
Pro forma provision for income taxes			5,055		5,351
Pro forma net income			$ 8,248		$ 8,731
Pro forma net income per share			$ 0.59		$ 0.62
Pro forma weighted average common shares outstanding			13,994		14,134

The accompanying notes are an integral part of the consolidated financial statements.

Mks Instruments, Inc.

CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY FOR THE YEARS ENDED DECEMBER 31, 1994, 1995 AND 1996 AND THE NINE MONTHS ENDED SEPTEMBER 30, 1997 (IN THOUSANDS, EXCEPT SHARE DATA)

	PREFERRED STOCK		COMMON STOCK CLASS A		CLASS B		ADDITIONAL
	SHARES	AMOUNT	SHARES	AMOUNT	SHARES	AMOUNT	PAID-IN CAPITAL
Balance at December 31,1993.....			5,177,940	$ 40	6,857,500	$ 73	$ 48
Capital contribution.....							
Distributions to stockholders.....							
Foreign currency translation adjustment.....							
Net income.....							
Balance at December 31, 1994.....	--	--	5,177,940	40	6,857,500	73	48
Distributions to stockholders.....							
Foreign currency translation adjustment.....							
Unrealized gain on investments.....							
Net income.....							
Balance at December 31, 1995.....	--	--	5,177,940	40	6,857,500	73	48
Distributions to stockholders.....							
Foreign currency translation adjustment.....							
Unrealized loss on investments.....							
Net income.....							
Balance at December 31, 1996.....	--	--	5,177,940	40	6,857,500	73	48
Distributions to stockholders.....							
Foreign currency translation adjustment.....							
Unrealized gain on investments.....							
Net income.....							
Balance at September 30, 1997.....	--	--	5,177,940	$ 40	6,857,500	$ 73	$ 48

	UNREALIZED GAIN ON INVESTMENTS	RETAINED EARNINGS	CUMULATIVE TRANSLATION ADJUSTMENT	TOTAL STOCKHOLDERS' EQUITY
Balance at December 31,1993.....		$27,200	$1,604	$ 28,965
Capital contribution.....		14		14
Distributions to stockholders.....		(2,575)		(2,575)
Foreign currency translation adjustment.....			865	865
Net income.....		10,003		10,003
Balance at December 31, 1994.....	--	34,642	2,469	37,272
Distributions to stockholders.....		(10,750)		(10,750)
Foreign currency translation adjustment.....			(34)	(34)
Unrealized gain on investments.....	$ 246			246
Net income.....		21,658		21,658
Balance at December 31, 1995.....	246	45,550	2,435	48,392
Distributions to stockholders.....		(14,500)		(14,500)
Foreign currency translation adjustment.....			(766)	(766)
Unrealized loss on investments.....	(131)			(131)
Net income.....		12,503		12,503
Balance at December 31, 1996.....	115	43,553	1,669	45,498
Distributions to stockholders.....		(6,400)		(6,400)
Foreign currency translation adjustment.....			(681)	(681)
Unrealized gain on investments.....	447			447
Net income.....		12,892		12,892
Balance at September 30, 1997.....	$ 562	$50,045	$ 988	$ 51,756

The accompanying notes are an integral part of the consolidated financial statements.

Mks Instruments, Inc.

Consolidated Statements of Cash Flows (In Thousands)

	YEAR ENDED DECEMBER 31,			NINE MONTHS ENDED SEPTEMBER 30,	
	1994	1995	1996	1996	1997
				(UNAUDITED)	
Cash flows from operating activities:					
Net income	$ 10,003	$ 21,658	$ 12,503	$ 10,291	$ 12,892
Adjustments to reconcile net income to net cash provided by operating activities:					
Depreciation and amortization of property, plant, and equipment	3,027	3,925	5,920	4,339	4,267
Loss on disposal of assets	--	--	--	--	574
Deferred taxes	(178)	(91)	(277)	(228)	(235)
Provision for doubtful accounts	241	133	(20)	8	255
Unrealized loss (gain) on investments	37	(37)	--	--	--
Forward exchange contract loss	--	--	302	44	431
Stock option compensation	--	--	--	--	40
Changes in operating assets and liabilities:					
(Increase) decrease in trade accounts receivable	(5,637)	(6,771)	6,119	2,624	(11,432)
(Increase) decrease in inventories	(2,137)	(10,956)	4,145	(1,956)	(3,129)
(Increase) decrease in other current assets	(188)	(2,752)	3,239	2,075	294
Increase (decrease) in accrued compensation	305	1,466	(220)	360	2,482
Increase (decrease) in other accrued expenses	970	3,135	(1,520)	(447)	1,724
Increase (decrease) in accounts payable	1,636	3,571	(4,221)	(4,398)	3,192
Increase (decrease) in income taxes payable	(365)	(111)	331	212	387
Net cash provided by operating activities	7,714	13,170	26,301	12,924	11,742
Cash flows from investing activities:					
Purchase of investments	(1,231)	--	--	--	--
Proceeds from maturity of investments	--	1,000	--	--	--
Purchases of property, plant and					

equipment	(1,922)	(9,194)	(9,417)	(7,274)	(1,904)
Proceeds from sale of property, plant and equipment	--	--	--	--	145
Increase in other assets	(824)	(1,047)	(443)	(1,009)	(368)
Cash used to settle forward exchange contracts	--	--	(302)	(44)	(431)
Acquisition of business, net of cash acquired	--	(3,926)	--	--	--
Net cash used in investing activities	(3,977)	(13,167)	(10,162)	(8,327)	(2,558)
Cash flows from financing activities:					
Net (payments) borrowings on demand notes payable	(336)	1,407	224	6,510	625
Proceeds from short-term borrowings	5,020	7,819	11,025	11,173	12,714
Payments on short-term borrowings	(2,670)	(4,150)	(9,628)	(9,135)	(12,698)
Proceeds from long-term debt	--	7,000	400	138	--
Principal payments on long-term debt	(1,037)	(1,156)	(2,093)	(1,530)	(1,406)
Capital contributions	14	--	--	--	--
Cash distributions to stockholders	(2,575)	(10,750)	(14,500)	(11,500)	(6,400)
Principal payments under capital lease obligations	(722)	(587)	(982)	(704)	(702)
Net cash used in financing activities	(2,306)	(417)	(15,554)	(5,048)	(7,867)
Effect of exchange rate changes on cash and cash equivalents	240	5	(420)	30	289
Increase (decrease) in cash and cash equivalents	1,671	(409)	165	(421)	1,606
Cash and cash equivalents at beginning of period	2,388	4,059	3,650	3,650	3,815
Cash and cash equivalents at end of period	$ 4,059	$ 3,650	$ 3,815	$ 3,229	$ 5,421
Supplemental disclosure of cash flow information:					
Cash paid during the period for:					
Interest	$ 1,313	$ 1,535	$ 2,363	$ 1,713	$ 1,385
Income taxes	$ 1,339	$ 1,194	$ 770	$ 936	$ 1,016
Noncash transactions during the period:					
Equipment acquired under capital leases	$ 626	$ 1,612	$ 2,074	$ 1,852	$ 89

The accompanying notes are an integral part of the consolidated financial statements.

Mks Instruments, Inc.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (TABLES IN THOUSANDS EXCEPT PER SHARE DATA) INFORMATION FOR THE NINE MONTHS ENDED SEPTEMBER 30, 1996 IS UNAUDITED.

1. Description of Business:

MKS Instruments, Inc. (the "Company") operates in one business segment. The Company is a worldwide supplier of instruments and components used to measure, control, analyze and isolate gases in semiconductor manufacturing processes, and in the manufacture of flat panel displays, magnetic and optical storage media, solar cells, fiber optic cables, optical coatings and other devices made possible through advances in materials science. The Company is subject to risks common to companies in the semiconductor industry including, but not limited to, the highly cyclical nature of the semiconductor industry leading to recurring periods of over supply, development by the Company or its competitors of new technological innovations, dependence on key personnel and the protection of proprietary technology.

2. Summary of Significant Accounting Policies:

Basis of Presentation The consolidated financial statements include the accounts of the Company and its subsidiaries. All significant intercompany accounts and transactions have been eliminated in consolidation. The Company has reflected the approximately 77.5% owned foreign subsidiaries as wholly-owned subsidiaries as the ownership interests are the same at the ultimate stockholder level. Upon the closing of the offering for which these financial statements are being prepared, the shares of the foreign subsidiaries owned directly by the ultimate stockholders will be contributed to the Company. Prior to the effectiveness of a registration statement relating to the initial public offering of the Common Stock of the Company, the Company will effect a 2,110-for-one stock split of its Common Stock, increase the number of authorized shares of Common Stock to 50,000,000 and authorize 2,000,000 shares of Preferred Stock. Accordingly, all share and per share amounts have been adjusted to reflect the stock split as though it had occurred at the beginning of the initial period presented.

Interim Financial Information The consolidated financial statements of the Company as of and for the nine months ended September 30, 1996, and the related footnote information are unaudited. All adjustments (consisting only of normal recurring adjustments) have been made, which in the opinion of management, are necessary for a fair presentation. Results of operations for the nine months ended September 30, 1997 are not necessarily indicative of the results that may be expected for any future period.

Pro Forma Balance Sheet Presentation (Unaudited) The Company intends to distribute the balance of its accumulated and undistributed S Corporation earnings (the "S Corporation Distribution") from the proceeds of the offering for which this registration statement is being prepared. The unaudited pro

forma balance sheet has been prepared assuming an estimated $30,183,000 distribution was payable as of September 30, 1997. The remaining balance in retained earnings represents accumulated earnings prior to the Company converting from a C Corporation to an S Corporation in 1987.

Pro Forma Net Income Per Share (Unaudited) Pro forma net income per share is based upon the weighted average number of common and common equivalent shares (using the treasury stock method) outstanding. Common equivalent shares are included in the per share calculations where the effect of their inclusion would be dilutive. Common equivalent shares consist of outstanding stock options. Pursuant to Securities and Exchange Commission Staff Accounting

Mks Instruments, Inc.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS -- (CONTINUED) (TABLES IN THOUSANDS EXCEPT PER SHARE DATA) INFORMATION FOR THE NINE MONTHS ENDED SEPTEMBER 30, 1996 IS UNAUDITED.

Bulletin No. 83, all common and common equivalent shares issued at prices less than the mid-point of the estimated initial public offering price range during the twelve-month period prior to the initial filing of the Registration Statement have been included in the calculation as if they were outstanding for all periods using the treasury stock method and the mid-point of the estimated initial public offering price.

Historical net income has been adjusted for the pro forma provision for income taxes calculated assuming the Company was subject to income taxation as a C Corporation, at a pro forma tax rate of 38%. In accordance with a regulation of the Securities and Exchange Commission, pro forma net income per share has been presented for the year ended December 31, 1996 and the nine months ended September 30, 1997 to reflect the affect of the assumed issuance of that number of shares of Common Stock of the Company necessary to be sold at the mid-point of the estimated initial public offering price in order to fund the intended distribution in the amount of the accumulated and undistributed S corporation earnings as of January 1, 1997. Pro forma fully diluted net income per share is not presented as it does not differ materially from pro forma net income per share.

Historical net income per share is not presented as it is not meaningful based upon the Company's planned conversion from an S Corporation to a C Corporation upon the closing of the offering for which these financial statements are being prepared.

Foreign Exchange

The functional currency of the Company's foreign subsidiaries is the applicable local currency. For those subsidiaries, assets and liabilities are translated to U.S. dollars at year-end exchange rates. Income and expense accounts are translated at the average exchange rates prevailing for the year. The resulting translation adjustments are accumulated in a separate component of consolidated stockholders' equity.

The Company enters into forward exchange contracts and local currency purchased options to mitigate its foreign currency exposures. Realized and unrealized gains and losses on forward exchange contracts and local currency purchased options that qualify for hedge accounting are recognized in earnings in the same period as the underlying hedged item. Realized and unrealized gains and losses on forward exchange contracts and local currency purchased option contract that do not qualify for hedge accounting are recognized immediately in earnings. The cash flows resulting from forward exchange contracts and local currency purchased options that qualify for hedge accounting are classified in the statement of cash flows as part of cash flows from operating activities. Cash flows resulting from forward exchange contracts and local currency purchased options that do not qualify for hedge accounting are classified in the statement of cash flows as investing activities.

Revenue Recognition

The Company recognizes revenue upon shipment. The Company accrues for anticipated returns and warranty costs upon shipment.

Cash and Cash Equivalents All highly liquid investments with an original maturity of three months or less at the date of purchase are considered to be cash equivalents. Cash equivalents consist of money market instruments.

Investments

The appropriate classification of investments in debt and equity securities is determined at the time of purchase. Debt securities that the Company has both the intent and ability to hold to maturity are carried at

amortized cost. Debt securities that the Company does not have the intent and ability to hold to maturity or equity securities are classified either as "available-for-sale" or as "trading" and are carried at fair value. Marketable equity securities are carried at fair value and classified either as available for sale or trading. Unrealized gains and losses on securities classified as available-for-sale are carried as a separate component of stockholders' equity. Unrealized gains and losses on securities classified as trading are reported in earnings.

Inventories

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

Property, Plant and Equipment Property, plant and equipment are stated at cost. Equipment acquired under capital leases is recorded at the present value of the minimum lease payments required during the lease period. Expenditures for major renewals and betterments that extend the useful lives of property, plant and equipment are capitalized. Expenditures for maintenance and repairs are charged to expense as incurred. When assets are sold or otherwise disposed of, the cost and related accumulated depreciation are eliminated from the accounts and any resulting gain or loss is recognized in earnings.

Depreciation is provided on the straight-line method over the estimated useful lives of 20 years for buildings and three to five years for machinery and equipment. Leasehold improvements are amortized over the shorter of the lease term or the estimated useful life of the lease.

Research and Development Research and development costs are expensed as incurred.

New Accounting Pronouncements In February 1997, the Financial Accounting Standards Board (the "FASB") issued Statement of Financial Accounting Standards No. 128, "Earnings Per Share." This statement specifies the computation, presentation and disclosure requirements for earnings per share ("EPS"), to simplify the existing computational guidelines and increase comparability on an international basis. The statement will be effective for interim and annual reporting periods ending after December 15, 1997, and the Company will adopt its provisions during the fourth quarter of 1997. This statement will replace "primary" EPS with "basic" EPS, the principal difference being the exclusion of common stock equivalents in the computation of basic EPS. In addition, this statement will require the dual presentation of basic and diluted EPS on the face of the consolidated statements of income. The Company does not expect this statement to have a material impact on its net income per share as presented.

In June 1997, the FASB issued Statement of Financial Accounting Standards No. 130, "Reporting Comprehensive Income." This statement requires that changes in comprehensive income be shown in a financial statement that is displayed with the same prominence as other financial statements. The statement will be effective for fiscal years beginning after December 15, 1997 and the Company will adopt its provisions in 1998. Reclassification for earlier periods is required for comparative purposes. The Company is currently evaluating the impact this statement will have on its financial statements; however, because the statement requires only additional disclosure, the Company does not expect the statement to have a material impact on its financial position or results of operations.

In June 1997, the FASB issued Statement of Financial Accounting Standards No. 131, "Disclosures about Segments of an Enterprise and Related Information." This statement supersedes Statement of Financial Accounting Standards No. 14, "Financial Reporting for Segments of a Business Enterprise."

This statement includes requirements to report selected segment information quarterly and entity-wide disclosures about products and services, major customers, and the material countries in which the entity holds assets and reports revenues. The statement will be effective for fiscal years beginning after December 15, 1997 and the Company will adopt its provisions in 1998. Reclassification for earlier periods is required, unless impracticable, for comparative purposes. The Company is currently evaluating the impact this statement will have on its financial statements; however, because the statement requires only additional disclosure, the Company does not expect the statement to have a material impact on its financial position or results of operations.

Reclassification of Prior Year Balances Certain reclassifications have been made to prior years' consolidated financial statements to conform to the current presentation.

3. Financial Instruments and Risk Management:

Foreign Exchange Risk Management The Company uses forward exchange contracts and local currency purchased options in an effort to reduce its exposure to currency fluctuations on future U.S. dollar cash flows derived from foreign currency denominated sales associated with the intercompany purchases of inventory. The Company has entered into forward exchange contracts, and to a lesser extent, local currency purchased options to hedge a portion of its probable anticipated, but not firmly committed transactions. The Company plans to use local currency purchased options prospectively to hedge probable anticipated, but not firmly committed transactions. The Company has also used forward exchange contracts to hedge firm commitments. Market value gains and losses on forward exchange contracts are recognized immediately in earnings unless a firm commitment exists. Market value gains and premiums on local currency purchased options on probable anticipated transactions and market value gains and losses on forward exchange contracts hedging firm commitments are recognized when the hedged transaction occurs. These contracts, which relate primarily to Japanese and European currencies generally have terms of eighteen months or less. The Company does not hold or issue derivative financial instruments for trading purposes.

Forward exchange contracts with notional amounts totaling $25,700,000, none, and $8,200,000 to exchange foreign currencies for U.S. dollars, were outstanding at December 31, 1995 and 1996, and September 30, 1997, respectively. Local currency purchased options with notional amounts totaling none, $3,722,000 and none to exchange foreign currencies for U.S. dollars were outstanding at December 31, 1995 and 1996 and September 30, 1997, respectively.

Foreign exchange losses of $479,000 and foreign exchange gains of $460,000 on forward exchange contracts that did not qualify for hedge accounting were recognized in earnings during 1996, and the nine months ended September 30, 1997, respectively, and are classified in other income. Gains on forward exchange contracts that qualify for hedge accounting of $3,061,000 and $978,000 were deferred and classified in other accrued expenses at December 31, 1995 and 1996, respectively. Gains of local currency purchased options deferred at December 31, 1996 that qualify for hedge accounting of $200,000 were deferred in other accrued expenses. Gains on forward exchange contracts and local

currency purchased options that qualify for hedge accounting are classified in cost of goods sold and totaled $927,000, $1,928,000, $2,476,000, and $1,554,000, and $978,000 for the years ended December 31, 1994, 1995, 1996, and the nine months ended

Mks Instruments, Inc.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS -- (CONTINUED) (TABLES IN THOUSANDS EXCEPT PER SHARE DATA) INFORMATION FOR THE NINE MONTHS ENDED SEPTEMBER 30, 1996 IS UNAUDITED.

September 30, 1996 and 1997, respectively. There are no forward exchange contracts outstanding at September 30, 1997 which qualify for hedge accounting.

The fair value of forward exchange contracts at September 30, 1997, determined by applying period end currency exchange rates to the notional contract amounts, amounted to $525,000. The fair value of local currency purchased options at December 31, 1996, obtained through dealer quotes, totaled approximately $200,000.

The market risk exposure from forward exchange contracts is assessed in light of the underlying currency exposures and is controlled by the initiation of additional or offsetting foreign currency contracts. The market risk exposure from options is limited to the cost of such investments. Credit risk exposure from forward exchange contract and local currency purchased option are minimized as these instruments are contracted with a major financial institution. The Company monitors the credit worthiness of this financial institution and full performance is anticipated.

Interest Rate Risk Management The Company utilizes an interest rate swap to fix the interest rate on certain variable rate term loans in order to minimize the effect of changes in interest rates on earnings. In 1993, the Company entered into a five-year interest rate swap agreement with a major financial institution for the notional amount of $5,000,000 equal to one half of the term loan described in Note 6. Under the agreement, the Company pays a fixed rate of 5.1% on the notional amount and receives the London Interbank Offering Rate ("LIBOR"). The interest differential paid or received on the swap agreement is recognized as an adjustment to interest expense. At September 30, 1997 the fair value of this interest rate swap, which represents the amount the Company would receive or pay to terminate the agreement, is a net receivable of $15,000, based on dealer quotes.

The market risk exposure from the interest rate swap is assessed in light of the underlying interest rate exposures. Credit risk exposure from the swap is minimized as the agreement is with a major financial institution. The Company monitors the creditworthiness of this financial institution and full performance is anticipated.

Concentrations of Credit Risk The Company's significant concentrations of credit risk consist principally of cash and cash equivalents and trade accounts receivable. The Company maintains cash and cash equivalents with financial institutions including the bank it has borrowings with.

Concentrations of credit risk with respect to trade accounts receivable are limited due to the large number of geographically dispersed customers. Credit is extended for all customers based on financial condition and, collateral is not required.

Fair Value of Financial Instruments The fair value of the term loans, including the current portion, approximates its carrying value given its variable rate interest provisions. The fair value of mortgage notes is based on borrowing rates for similar instruments and approximates its carrying value. For all other balance sheet financial instruments, the carrying amount approximates fair value because of the short period to maturity of these instruments.

Use of Estimates

The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and

Mks Instruments, Inc.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS -- (CONTINUED) (TABLES IN THOUSANDS EXCEPT PER SHARE DATA) INFORMATION FOR THE NINE MONTHS ENDED SEPTEMBER 30, 1996 IS UNAUDITED.

disclosure of contingent assets and liabilities at the dates of the financial statements and the reported amounts of revenues and expenses during the reporting periods. Actual results could differ from those estimates.

4. Inventories:

Inventories consist of the following:

	DECEMBER 31,		SEPTEMBER 30,
	1995	1996	1997
Raw material	$ 10,839	$ 10,337	$ 10,292
Work in process	8,833	6,177	7,066
Finished goods	10,288	8,986	10,723
	$ 29,960	$ 25,500	$ 28,081

5. Property, Plant and Equipment:

Property, plant and equipment consist of the following:

	DECEMBER 31,		SEPTEMBER 30,
	1995	1996	1997
Land	$ 7,923	$ 8,295	$ 8,581
Buildings	22,728	26,885	26,387

Machinery and equipment	22,202	24,711	24,025
Furniture and fixtures	5,412	8,046	9,372
Leasehold improvements	816	1,184	896
	59,081	69,121	69,261
Less: accumulated depreciation and amortization	25,871	31,114	34,918
	$ 33,210	$ 38,007	$ 34,343

6. Debt:

Credit Agreements and Short-term Borrowings In February 1996, the Company entered into a loan agreement with a bank which provides access to a revolving credit loan and term loan. This agreement has since been amended. The revolving credit facility provides for uncollateralized borrowings up to $20,000,000, which expires on June 30, 1999. Interest on borrowings is payable quarterly at varying rates based, subject to the Company's option, at the bank's base rate, or money market rate, or LIBOR. At December 31, 1995 and 1996 and September 30, 1997, the interest rate in effect was the bank's base rate of 8.5%, 8.25%, and 8.5%, respectively. At December 31, 1995 and 1996 and September 30, 1997, the Company had $1,525,000, $1,875,000, and $2,500,000, respectively, of borrowings, under this revolving credit loan.

Additionally, certain of the Company's foreign subsidiaries have lines of credit and short-term borrowing arrangements with various financial institutions which provide for aggregate borrowings as of September 30, 1997 of up to $13,300,000, which generally expire and are renewed at six month intervals. At December 31, 1995 and 1996 and September 30, 1997, total borrowings outstanding under these arrangements were $10,739,000, $10,950,000, and $10,671,000, respectively, at interest rates ranging from 1.3% to 13.7%, 1.3% to

15.5%, and 1.3% to 14.5%, respectively. Foreign short-term borrowings are generally collateralized by certain trade accounts receivable and are guaranteed by a domestic bank.

Long-Term Debt

Long-term debt consists of the following:

	DECEMBER 31,		SEPTEMBER 30,
	1995	1996	1997
Term loans	$15,528	$13,861	$12,611
Mortgage notes	5,292	4,675	3,978
Total long-term debt	20,820	18,536	16,589
Less: current portion	2,203	2,258	2,153
Long-term debt less current portion	$18,617	$16,278	$14,436

The term loan facility of the loan agreement entered into on November 1, 1993, provided for borrowings of $10,000,000. Principal payments are payable in equal monthly installments of $56,000 through October 1, 2000, with the remaining principal payment due on November 1, 2000. The loan is collateralized by certain land, buildings, and equipment.

On October 31, 1995, the Company entered a loan agreement with the same bank which provided additional uncollateralized term loan borrowings of $7,000,000. Principal payments on the additional term loan borrowings are payable in equal monthly installments of $83,000 through June 1, 2002, with the remaining principal payment due on June 30, 2002.

Interest on the term loan borrowings is payable monthly at varying rates based, subject to the Company's option, at the bank's base rate, or money market rate, or LIBOR. At December 31, 1995 and 1996 and September 30, 1997, the interest rates in effect for these borrowings were 7.1%, 7.375%, and 6.925%, respectively.

The terms of the loan agreements, as amended, contain, among other provisions, requirements for maintaining certain levels of tangible net worth and other financial ratios. The agreement also contains restrictions with respect to acquisitions. Under the most restrictive covenant, the operating cash flow to debt service ratio for a fiscal quarter shall not be less than 1.25 to 1.0. In the event of default of these covenants or restrictions, any obligation then outstanding under the loan agreement shall become payable upon demand by the bank. The Company was in compliance with these covenants and restrictions at September 30, 1997.

The Company has loans outstanding from various foreign banks in the form of mortgage notes at interest rates ranging from 2.1% to 10.75%. Principal and interest are payable in monthly installments through 2010. The loans are collateralized by mortgages on certain of the Company's foreign properties.

Mks Instruments, Inc.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS -- (CONTINUED) (TABLES IN THOUSANDS EXCEPT PER SHARE DATA) INFORMATION FOR THE NINE MONTHS ENDED SEPTEMBER 30, 1996 IS UNAUDITED.

Aggregate maturities of long-term debt over the next five years are as follows:

Aggregate Maturities

October 1, 1997 to December 31, 1997	$ 577
Year ending December 31, 1998	2,095
Year ending December 31, 1999	2,037
Year ending December 31, 2000	7,322
Year ending December 31, 2001	1,384
Year ending December 31, 2002	1,307
Thereafter	1,867
	$ 16,589

7. Lease Commitments:

The Company leases certain of its facilities and machinery and equipment under capital and operating leases expiring in various years through 2002 and thereafter. Generally, the facility leases require the Company to pay maintenance, insurance and real estate taxes. Rental expense under operating leases totaled $1,506,000, $1,985,000 and $2,487,000, for the years ended December 31, 1994, 1995 and 1996, respectively, and $1,919,000 and $1,876,000 for the nine month period ended September 30, 1996 and 1997, respectively.

Minimum lease payments under operating and capital leases are as follows:

	OPERATING LEASES		CAPITAL LEASES
	REAL ESTATE	EQUIPMENT	EQUIPMENT
October 1, 1997 to December 31, 1997	$ 523	$ 149	$ 313
Year ending December 31, 1998	1,073	447	1,187
Year ending December 31, 1999	362	268	915
Year ending December 31, 2000	78	82	691
Year ending December 31, 2001	9	33	209
Year ending December 31, 2002	--	19	9
Thereafter	--	29	--
Total minimum lease payments	$ 2,045	$ 1,027	3,324
Less: amounts representing interest			364
Present value of minimum lease payments			2,960
Less: current portion			1,048
Long-term portion			$ 1,912

8. Stockholders' Equity:

Prior to the effectiveness of a registration statement relating to the initial public offering of Common Stock of the Company, the Company will effect a 2,110 to one stock split of its common stock, increase the number of authorized shares of common stock to 50,000,000 and will authorize 2,000,000 shares of $0.01 par value Preferred Stock. Accordingly, all share data has been restated to reflect the Common Stock split.

Mks Instruments, Inc.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS -- (CONTINUED) (TABLES IN THOUSANDS EXCEPT PER SHARE DATA) INFORMATION FOR THE NINE MONTHS ENDED SEPTEMBER 30, 1996 IS UNAUDITED.

Common Stock

The Company has two classes of Common Stock. Stockholders of Class A Common Stock are entitled to voting rights with one vote for each share of Common Stock. Stockholders of Class B Common Stock are not entitled to voting rights.

Upon the closing of the offering for which this Registration Statement is being prepared each outstanding share of Class A and Class B Common Stock of the Company will be converted into an aggregate of 12,035,440 shares of Common Stock.

Stock Option Plans

The Company grants options to employees under the 1995 Stock Incentive Plan (the "Plan") and to Directors under the 1996 Directors' Stock Plan (the "Directors' Plan").

Under the Plan, options to purchase 1,804,050 shares of the Company's authorized but unissued Common Stock may be granted. Under the Director's Plan, 42,200 such options may be granted. Stock options are granted at 100% of the fair value of the Company's Common Stock as determined by the Board of Directors on the date of grant. In reaching the determination of fair value at the time of each grant, the Board considered a range of factors, including the Company's current financial position, its recent revenues, results of operations and cash flows, its assessment of the Company's competitive position in its markets and prospects for the future, the status of the Company's product development and marketing efforts, current valuations for comparable companies and the illiquidity of an investment in the Company's common stock. Generally, stock options under the Plan vest 20% after one year and 5% per quarter thereafter, and expire 10 years after the grant date. Under the Directors' Plan, the options granted in 1996 vest over three years and options granted in 1997 and later vest at the earlier of (a) the next annual meeting, (b) 13 months from date of grant or (c) the effective date of an acquisition as defined in the Directors' Plan.

The following table presents the activity for options under the Plan.

	YEAR ENDED DECEMBER 31, 1995		YEAR ENDED DECEMBER 31, 1996		NINE MONTHS ENDED SEPTEMBER 30, 1997	
	OPTIONS	WEIGHTED AVERAGE EXERCISE PRICE	OPTIONS	WEIGHTED AVERAGE EXERCISE PRICE	OPTIONS	WEIGHTED AVERAGE EXERCISE PRICE
Outstanding -- beginning of period....	--	--	405,513	$16.59	540,292	$ 6.64
Granted.....	405,513	$16.59	540,292	6.64	502,669	6.64
Exercised.....	--	--	--	--	--	--
Forfeited or Expired.....	--	--	(405,513)	16.59	(21,100)	6.64
Outstanding -- end of period.....	405,513	$16.59	540,292	$ 6.64	1,021,861	$ 6.64
Exercisable at end of period.....	--	--	76,521	$ 6.64	274,980	$ 6.64

At September 30, 1997, Plan options for 1,021,861 shares were outstanding at an exercise price of $6.64. The weighted average remaining contractual life of these options was 8.5 years.

During 1996, 18,088 options were granted at an exercise price of $6.64 per share under the Directors' Plan and were outstanding at December 31, 1996. Of these options, 3,016 were exercisable. During 1997, options for 2,412 shares were granted at an exercise price of $6.64 per share. At September 30, 1997, 20,500 options were outstanding with 7,536 exercisable at the $6.64 per share price.

Mks Instruments, Inc.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS -- (CONTINUED) (TABLES IN THOUSANDS EXCEPT PER SHARE DATA) INFORMATION FOR THE NINE MONTHS ENDED SEPTEMBER 30, 1996 IS UNAUDITED.

The Company has adopted the disclosure-only provisions of Statement of Financial Accounting Standards No. 123 (SFAS No. 123), "Accounting for Stock-Based Compensation" for the year ended December 31, 1996. The Company has chosen to continue to account for stock-based compensation using the intrinsic value method prescribed in Accounting Principles Board Opinion No. 25, "Accounting for Stock Issued to Employees" and related interpretations. Accordingly, compensation cost for stock options is measured as the excess, if any, of the fair value of the Company's stock at the date of grant over the amount an employee must pay to acquire the stock.

The disclosures required under SFAS No. 123 have been omitted as they are not meaningful based upon the Company's planned conversion from an S Corporation to a C Corporation upon the closing of the offering for which these financial statements are being prepared.

9. Income Taxes:

The Company has elected to be taxed as an S Corporation for federal and certain states income tax purposes and, as a result, is not subject to Federal taxation but is subject to state taxation on income in certain states. The stockholders are liable for individual Federal and certain state income taxes on their allocated portions of the Company's taxable income.

The components of income before income taxes and the historical related provision for income taxes consist of the following:

	YEAR ENDED DECEMBER 31,			NINE MONTHS ENDED SEPTEMBER 30,
	1994	1995	1996	1997
Income before income taxes:				
United States	$ 9,888	$21,183	$11,953	$13,101
Foreign	915	1,475	1,350	981
	$10,803	$22,658	$13,303	$14,082
Current taxes:				
State	$ 368	$ 434	$ 285	$ 853
Foreign	610	657	792	572
	978	1,091	1,077	1,425
Deferred taxes:				
State	(55)	(88)	(156)	(128)
Foreign	(123)	(3)	(121)	(107)
	(178)	(91)	(277)	(235)
Provision for income taxes	$ 800	$ 1,000	$ 800	$ 1,190

As the Company is not subject to Federal income taxes, a reconciliation of the effective tax rate to the Federal statutory rate is not meaningful.

Mks Instruments, Inc.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS -- (CONTINUED) (TABLES IN THOUSANDS EXCEPT PER SHARE DATA) INFORMATION FOR THE NINE MONTHS ENDED SEPTEMBER 30, 1996 IS UNAUDITED.

At December 31, 1995, 1996, and September 30, 1997 the components of the deferred tax asset and deferred tax liability were as follows:

	DECEMBER 31,		SEPTEMBER 30,
	1995	1996	1997
Deferred tax assets (liabilities):			
Inventory	$143	$234	$ 314
Intercompany profits	125	160	193
Compensation	62	72	103
Investment booked under the equity method	(17)	(28)	(41)
Other	(179)	(34)	(37)
Total	$134	$404	$ 532

10. Employee Benefit Plans:

The Company has a 401(k) profit-sharing plan for U.S. employees meeting certain requirements in which eligible employees may contribute from 1% up to 12% of their compensation. The Company, at its discretion, may provide a matching contribution which will generally match up to the first 2% of each participant's compensation, plus 25% of the next 4% of compensation. At the discretion of the Board of Directors, the Company may also make additional contributions for the benefit of all eligible employees. The Company's contributions are generally paid annually, and were $1,324,000, $1,850,000, and $2,170,000 for the years ended December 31, 1994, 1995, and 1996. Approximately $2,100,000 has been accrued as the Company's contribution for the nine month period ended September 30, 1997 and is included in accrued compensation.

The Company maintains a bonus plan which provides cash awards to key employees, at the discretion of the Board of Directors, based upon operating results and employee performance. Bonus expense to key employees was $1,231,000, $764,000, and none, for the years ended December 31, 1994, 1995, and 1996, respectively, and none and $956,000 for the nine months ended September 30, 1996 and 1997, respectively.

On September 30, 1995, the Board of Directors voted to terminate the Company's stock appreciation plan covering certain key employees. Performance shares awarded under the Plan entitled the employee to a pro rata share increase in the adjusted net book value of the Company. The Company recorded compensation expense of $160,000 and $199,000 under this plan for the years ended December 31, 1994 and 1995, respectively.

11. Restructuring:

In 1996, the Company recorded a restructuring charge of $1,400,000, primarily related to reduction of personnel and the closure of facilities in Phoenix, AZ and San Jose, CA. These charges include $425,000 of severance pay, $710,000 of lease commitments, and $265,000 for the write-off of leasehold improvements. The closure concluded during fiscal year 1997. The remaining balance of the restructuring charge of approximately $400,000 for lease commitments is included in "Other Accrued Expenses" in the accompanying balance sheet as of September 30, 1997.

Mks Instruments, Inc.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS -- (CONTINUED) (TABLES IN THOUSANDS EXCEPT PER SHARE DATA) INFORMATION FOR THE NINE MONTHS ENDED SEPTEMBER 30, 1996 IS UNAUDITED.

12. Geographic Financial Information and Significant Customer:

	YEAR ENDED DECEMBER 31,			NINE MONTHS ENDED SEPTEMBER 30,
	1994	1995	1996	1997
Net sales to unaffiliated customers:				
United States	$ 72,006	$107,003	$119,423	$ 97,080
Europe	12,076	17,696	18,735	13,505
Asia	21,140	30,987	31,066	22,848
Canada	1,607	1,478	1,638	1,196
Total net sales	$106,829	$157,164	$170,862	$134,629
Transfers between geographic areas (eliminated in consolidation):				
United States	$ 18,543	$ 28,420	$ 34,100	$ 25,925
Europe	983	1,700	1,426	577
Asia	118	233	199	204
Total transfers	$ 19,644	$ 30,353	$ 35,725	$ 26,706
Income from operations:				
United States	$ 10,680	$ 22,013	$ 14,406	$ 14,312
Europe	337	974	881	284
Asia	934	1,062	653	255
Canada	136	57	128	237
Income from operations	$ 12,087	$ 24,106	$ 16,068	$ 15,088

	AS OF DECEMBER 31,			AS OF SEPTEMBER 30,
	1994	1995	1996	1997
Identifiable assets:				
United States	$43,521	$ 71,171	$65,957	$ 76,616
Europe	8,812	10,174	9,883	9,502
Asia	19,344	22,678	18,524	20,162
Canada	643	488	636	405
Total assets	$72,320	$104,511	$95,000	$106,685

Export sales were less than 10% for all periods presented. Net sales to unaffiliated customers is based on the location of the operation which generated the sale. Transfers between geographic areas are at negotiated transfer prices and have been eliminated from consolidated net sales. Income from operations consists of total net sales less operating expenses, and does not include either interest income, interest expense, or income taxes. United States income from operations is net of corporate expenses. Identifiable assets of geographic areas are those assets related to the Company's operations in each area.

The Company had one customer comprising 9%, 14%, 15%, and 21% of net sales for the years ended December 31, 1994, 1995 and 1996 and for the nine month period ended September 30, 1997, respectively.

Inside Back Cover (Pg.5):

The inside back cover graphically depicts MKS Instruments' message of being a worldwide provider of process control solutions. It is produced in four-color process. In the center of the page is a photo of the Earth, with the tag line "Providing Solutions Around the Process, Around the World" wrapping around the photo. The background of the page is dark, with the MKS logo appearing at the top, knocking out to white. Photos of MKS products surround the globe image--above, below, left, and right--and include MKS Baratron Capacitance Manometers, a Throttling Poppet Valve, a Pressure Controller, Mass Flow Controllers, an In Situ Flow Verifier, a Direct Liquid Injection Subsystem, and a Residual Gas Analyzer.

No dealer, sales representative or any other person has been authorized to give any information or to make any representations in connection with this Offering other than those contained in this Prospectus, and, if given or made, such information or representation must not be relied upon as having been authorized by the Company or the Underwriters. This Prospectus does not constitute an offer to sell or a solicitation of an offer to buy any of the securities other than the shares of Common Stock to which it relates or an offer to, or a solicitation of, any person in any jurisdiction in which such an offer or solicitation is unlawful. Neither the delivery of this Prospectus nor any sale made hereunder shall, under any circumstances, create any implication that there has been no change in the affairs of the Company or that the information contained herein is correct as of any time subsequent to the date hereof.

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Until , 1998 (25 days after the date of this Prospectus), all dealers effecting transactions in the Common Stock, whether or not participating in this distribution, may be required to deliver a Prospectus. This is in addition to the obligation of dealers to deliver a Prospectus when acting as Underwriters and with respect to their unsold allotments or subscriptions 4,000,000 SHARES MKS INSTRUMENTS, INC. COMMON STOCK PROSPECTUS NATIONSBANC MONTGOMERY SECURITIES, INC.

Donaldson, Lufkin & Jenrette

Securities Corporation

Painewebber Incorporated

, 1998

Part Ii

Information Not Required in Prospectus

Item 13. Other Expenses of Issuance and Distribution.

Estimated expenses payable in connection with the sale of the Common Stock offered hereby are as follows:

SEC Registration Fee	$20,209
NASD Filing Fee	7,400
Printing, Engraving and Mailing Expenses	*
Nasdaq Listing Fee	*
Legal Fees and Expenses	*
Accounting Fees and Expenses	*
Blue Sky Fees and Expenses	*
Transfer Agent and Registrar Fees	*
Miscellaneous	*
Total	$ *

* To be filed by amendment The Company will bear all expenses shown above.

Item 14. Indemnification of Directors and Officers.

Section 67 of Chapter 156B of the Massachusetts General Laws provides that a corporation may indemnify its directors and officers to the extent specified in or authorized by (i) the articles of organization; (ii) a by-law adopted by the stockholders; or (iii) a vote adopted by the holders of a majority of the shares of stock entitled to vote on the election of directors. In all instances, the extent to which a corporation provides indemnification to its directors and officers under Section 67 is optional. In its Amended and Restated Articles of Organization (the "Articles of Organization"), the Registrant has elected to commit to provide indemnification to its directors and officers in specified circumstances. Generally, Article 6 of the Registrant's Articles of Organization provides that the Registrant shall indemnify directors and officers of the Registrant against liabilities and expenses arising out of legal proceedings brought against them by reason of their status as directors or officers or by reason of their agreeing to serve, at the request of the Registrant, as a director or officer with another organization. Under this provision, a director or officer of the Registrant shall be indemnified by the Registrant for all costs and expenses (including attorneys' fees), judgments, liabilities and amounts paid in settlement of such proceedings, even if he is not successful on the merits, if he acted in good faith in the reasonable belief that his action was in the best interests of the Registrant. The Board of Directors may authorize advancing litigation expenses to a director or officer at his request upon receipt of an undertaking by any such director of officer to repay such expenses if it is ultimately determined that he is not entitled to indemnification for such expenses.

Article 6 of the Registrant's Articles of Organization eliminates the personal liability of the Registrant's directors to the Registrant or its stockholders for monetary damages for breach of a director's fiduciary duty, except to the extent Chapter 156B of the Massachusetts General Laws prohibits the elimination or limitation of such liability.

The Underwriting Agreement, a form of which is filed at Exhibit 1.1 to this Registration Statement on Form S-1 (the "Underwriting Agreement"), provides that the Underwriters are obligated under certain circumstances to indemnify directors, officers and controlling persons of the Registrant against certain liabilities, including liabilities under the Securities Act of 1933, as amended (the "Securities Act"). Reference is made to the form of Underwriting Agreement.

The Company has obtained directors and officers liability insurance for the benefit of its directors and certain of its officers.

Item 15. Recent Sales of Unregistered Securities.

In the three years preceding the filing of this Registration Statement, the Registrant has not sold any securities. The registrant has awarded to employees and directors options to purchase 1,042,361 shares of Common Stock. The grant of options were exempt from registration under the Securities Act by virtue of the provisions of Section 4(2) of the Securities Act or Rule 701 thereunder.

Item 16. Exhibits and Financial Statement Schedules.

(a) Exhibits:

Ex. No. Description

1.1	Form of Underwriting Agreement
3.1	Restated Articles of Organization, as amended
*3.2	Form of Amended and Restated Articles of Organization
3.3	By-laws, as amended
*3.4	Form of Amended and Restated By-laws
*4.1	Specimen certificate representing the Common Stock
*5.1	Opinion of Hale and Dorr LLP
*10.1	Amended and Restated 1995 Incentive Stock Option Plan
*10.2	1996 Director Stock Option Plan, as amended
*10.3	1997 Director Stock Option Plan
*10.4	1997 Employee Stock Purchase Plan
10.5	Amended and Restated Employment Agreement dated as of December 15, 1995 between Leo Berlinghieri and the Registrant
10.6	Amended and Restated Employment Agreement dated as of December 15, 1995 between John J. Sullivan and the Registrant
10.7	Amended and Restated Employment Agreement dated as of December 15, 1995 between Ronald C. Weigner and the Registrant
10.8	Amended and Restated Employment Agreement dated as of December 15, 1995 between William D. Stewart and the Registrant
10.9	Loan Agreement dated as of October 31, 1995, as amended February 23, 1996, by and between the First National Bank of Boston and the Registrant
10.10	Lease Agreement dated as of October 12, 1989, as extended October 14, 1994, by and between Aspen Industrial Park Partnership and HPS, a division of MKS Instruments, Inc.
10.11	Loan Agreement dated as of November 1, 1993, as last amended February 4, 1997 between the First National Bank of Boston and the Registrant
10.12	Lease dated as of September 21, 1995 by and between General American Life Insurance Company and the Registrant
10.13	Loan Agreement dated as of February 23, 1996, as last amended February 4, 1997 between the First National Bank of Boston, Chemical Bank and the Registrant
10.14	Revolving Credit Note ($8,000,000) dated February 23, 1996 between Chemical Bank, The First National Bank of Boston and the Registrant
10.15	Revolving Credit Note ($12,000,000) dated February 23, 1996 between Chemical Bank, The First National Bank of Boston and the Registrant

Ex. No. Description

10.16	Promissory Note dated as of August 1990 between Jefferson National Life Insurance Company and the Registrant
**10.17	Purchase Agreement dated June 1, 1996 by and between Applied Materials, Inc. and the Registrant

10.18	Management Incentive Program
10.19	Lease dated as of December 21, 1989, as last amended December 1996, between the Registrant and Walpole Park South II Trust
10.20	Lease dated as of January 1, 1996 between MKS Japan, Inc., a subsidiary of the Registrant, and MiFuji Kanzai Co. Ltd. (covering Floor 5)
10.21	Lease dated as of April 21, 1997 between MKS Japan, Inc., a subsidiary of the Registrant, and MiFuji Kanzai Co. Ltd. (covering Floors 1 and 2)
10.22	Split-Dollar Agreement dated as of September 12, 1991 between the Registrant, John R. Bertucci and Claire R. Bertucci and Richard S. Chute, Trustees of the John R. Bertucci Insurance Trust of January 10, 1986
10.23	Split-Dollar Agreement dated as of September 12, 1991 between the Registrant, John R. Bertucci and John R. Bertucci and Thomas H. Belknap, Trustees of the Claire R. Bertucci Insurance Trust of January 10, 1986
*10.24	Tax Indemnification and S Corporation Distribution Agreement
11.1	Statement re Computation of Per Share Earnings
21.1	Subsidiaries of the Registrant
*23.1	Consent of Hale and Dorr LLP (contained in Exhibit 5.1)
23.2	Consent of Coopers & Lybrand L.L.P.
24	Power of Attorney (included on Page II-4)
27	Financial Data Schedule

* To be filed by amendment. ** Confidential materials omitted and filed separately with the Securities and Exchange Commission.

(b) FINANCIAL STATEMENTS SCHEDULES Report of Independent Accountants on Schedule II -- Valuation and Qualifying Accounts Schedule II -- Valuation and Qualifying Accounts

Item 17. Undertakings.

Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer and controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the questions whether such indemnification by it is against public policy as expressed in the Act and will be governed by the final adjudication of such issue.

The undersigned registrant hereby undertakes that:

(1) For purposes of determining any liability under the Securities Act of 1933, the information omitted from the form of prospectus filed as part of a registration statement in reliance upon Rule 430A and contained in the form of prospectus filed by the registrant pursuant to Rule 424(b)(1) or (4) or 497(h) under the Securities Act shall be deemed to be part of this registration statement as of the time it was declared effective.

(2) For the purpose of determining any liability under the Securities Act of 1933, each post-effective amendment that contains a form of prospectus shall be deemed to be a new registration statement relating to the securities offer therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

Signatures

Pursuant to the requirements of the Securities Act of 1933, the Registrant has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Andover, Commonwealth of Massachusetts, on this 14 day of November, 1997.

Mks Instruments, Inc.

By: /s/ JOHN R. BERTUCCI JOHN R. BERTUCCI CHAIRMAN OF THE BOARD, PRESIDENT AND CHIEF EXECUTIVE OFFICER

Power of Attorney

We, the undersigned officers and directors of MKS Instruments, Inc., hereby severally constitute and appoint John R. Bertucci, Ronald C. Weigner and Robert F. O'Brien and each of them singly, our true and lawful attorneys with full power to them, and each of them singly, to sign for us and in our names, in the capacities indicated below, the Registration Statement field herewith, and any and all amendments (including post-effective amendments) to said Registration Statement (or any other registration statement for the same offering that is to be effective upon filing pursuant to Rule 462(b) under the Securities Act of 1933) and generally to do all such things in our names and behalf in our capacities as officers and directors to enable MKS Instruments, Inc. to comply with the Securities Act of 1933, and all requirements of the Securities and Exchange Commission, hereby ratifying and confirming our signatures as they may be signed by our said attorneys, or any of them, to any such registration statement and any and all amendments thereto.

Witness our hands and common seal on the date set forth below.

Pursuant to the requirements of the Securities Act of 1933, this Registration Statement has been signed by the following persons in the capacities and on the dates indicated.

Signatures Title Date

/s/ JOHN R. BERTUCCI - ---------- JOHN R. BERTUCCI	Chairman of the Board of Directors, President and Chief Executive Officer (Principal Executive Officer)	November 14, 1997
/s/ RONALD C. WEIGNER - ----------	Vice President and Chief Financial Officer (Principal	November 14, 1997

RONALD C. WEIGNER	Financial and Accounting Officer)

/s/ RICHARD S. CHUTE Director November 14, 1997 RICHARD S. CHUTE /s/ OWEN W. ROBBINS Director November 14, 1997 OWEN W. ROBBINS /s/ ROBERT J. THERRIEN Director November 14, 1997 ROBERT J. THERRIEN /s/ LOUIS P. VALENTE Director November 14, 1997 LOUIS P. VALENTE

Report of Independent Accountants

To the Board of Directors and Stockholders of MKS Instruments, Inc.:

In connection with our audits of the consolidated financial statements of MKS Instruments, Inc. as of December 31, 1995 and 1996, and September 30, 1997, and for each of the years ended December 31, 1994, 1995 and 1996 and the nine month period ended September 30, 1997, we have also audited the consolidated financial statement schedule listed in Item 16(b) herein.

In our opinion, the consolidated financial statement schedule, when considered in relation to the basic financial statements taken as a whole, presents fairly, in all material respects, the information required to be included therein.

Coopers & Lybrand L.l.p.

Boston, Massachusetts October 28, 1997

Schedule Ii

Mks Instruments, Inc.

Valuation and Qualifying Accounts (In Thousands)

	BALANCE AT BEGINNING OF PERIOD	PROVISION CHARGED TO EXPENSE	ACCOUNTS WRITTEN OFF	BALANCE AT END OF PERIOD
YEAR ENDED DECEMBER 31, 1994				
Allowance for Doubtful Accounts	$261	241	83	$419
YEAR ENDED DECEMBER 31, 1995				
Allowance for Doubtful Accounts	$419	133	10	$542
YEAR ENDED DECEMBER 31, 1996				
Allowance for Doubtful Accounts	$542	(20)	40	$

```
482
NINE MONTHS ENDED SEPTEMBER 30, 1997
  Allowance for Doubtful Accounts.....................      $482           255            119        $
618
```

Exhibit 23.2

Consent of Independent Accountants

We consent to the inclusion in this registration statement on Form S-1 (File No.) of our reports dated October 28, 1997, on our audits of the consolidated financial statements and financial statement schedule of MKS Instruments, Inc. We also consent to the reference to our firm under the caption "Experts" and "Selected Consolidated Financial Data."

Coopers & Lybrand L.l.p.

Boston, Massachusetts November 12, 1997 </TEXT>