

SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

FORM 8-K

CURRENT REPORT
PURSUANT TO SECTION 13 OR 15(d) OF
THE SECURITIES EXCHANGE ACT OF 1934

Date of Report (Date of earliest event reported): January 14, 2004

MKS Instruments, Inc.

(Exact name of registrant as specified in charter)

Massachusetts

0-23621

04-2277512

(State or other jurisdiction of
incorporation)

(Commission
File Number)

(IRS Employer
Identification No.)

Six Shattuck Road, Andover, Massachusetts

01810

(Address of principal executive offices)

(Zip Code)

Registrant's telephone number, including area code: (978) 975-2350

(Former name or former address, if changed since last report)

ITEM 5. OTHER EVENTS AND REQUIRED FD DISCLOSURE.

On July 24, 2000, the Securities and Exchange Commission (the "Commission") declared effective the Registration Statement on Form S-3 (File No. 333-34450) (the "2000 Registration Statement") of MKS Instruments, Inc. (the "Company"), for the registration of an aggregate of 3,450,000 shares of common stock, no par value per share (the "Common Stock"), of the Company, of which, 2,300,000 shares were registered on behalf of the Company and 1,150,000 share were registered on behalf of certain stockholders of the Company.

On November 18, 2003, the Commission declared effective the Registration Statement on Form S-3 (File No. 333-109753) (the "2003 Registration Statement") of the Company, for the registration of an aggregate of 5,150,000 shares of Common Stock, of which, 1,150,000 shares were registered on behalf of the Company and 4,000,000 shares were registered on behalf of certain stockholders of the Company. Pursuant to Rule 429 under the Securities Act of 1933, as amended, the prospectus dated November 18, 2003 included in the 2003 Registration Statement (the "Prospectus") also relates to the 3,450,000 shares of Common Stock previously registered but not sold under the 2000 Registration Statement.

The Company filed with the Commission on January 15, 2004 the Prospectus, together with a supplement to the Prospectus dated January 14, 2004 (the "Prospectus Supplement"), relating to (i) the issuance and sale by the Company of 1,142,857 shares of Common Stock, plus up to an additional 171,429 shares of Common Stock to cover the underwriters' over-allotment option and (ii) the sale by certain stockholders of the Company of an aggregate of 2,857,143 shares of Common Stock, plus up to an additional 428,571 shares of Common Stock to cover the underwriters' over-allotment option (collectively, the "Shares"). In connection with the filing of the Prospectus and the Prospectus Supplement with the Commission and the offering of the Shares, the Company is filing the purchase agreement relating thereto as part of this Current Report on Form 8-K as Exhibit 1.1, a legal opinion of Hale and Dorr LLP relating to the Shares as part of this Current Report on Form 8-K as Exhibit 5.1 and a press release dated January 15, 2004 relating to the pricing of the Shares as part of this Current Report on Form 8-K as Exhibit 99.1.

ITEM 7. FINANCIAL STATEMENTS, PRO FORMA FINANCIAL INFORMATION AND EXHIBITS.

(c) Exhibits

Exhibit No.	Description
- - - - -	- - - - -
1.1	Purchase Agreement dated as of January 14, 2004 by and among MKS Instruments, Inc., the Selling Stockholders named therein, Merrill Lynch & Co., Merrill Lynch, Pierce, Fenner & Smith Incorporated, J.P. Morgan Securities, Inc., Adams, Harkness & Hill, Inc. and Needham & Company, Inc.
5.1	Opinion of Hale and Dorr LLP.
23.1	Consent of Hale and Dorr LLP (included in Exhibit 5.1).
99.1	Press Release dated January 15, 2004.

SIGNATURE

Pursuant to the requirements of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

Date: January 15, 2004

MKS Instruments, Inc.

By: /s/ Ronald C. Weigner

Ronald C. Weigner,
Vice President & Chief Financial Officer

EXHIBIT INDEX

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MKS INSTRUMENTS, INC.
(a Massachusetts corporation)
4,000,000 Shares of Common Stock
PURCHASE AGREEMENT

Dated: January 14, 2004
=====

MKS INSTRUMENTS, INC.

(a Massachusetts corporation)

4,000,000 Shares of Common Stock

(No Par Value Per Share)

PURCHASE AGREEMENT

January 14, 2004

MERRILL LYNCH & CO.

Merrill Lynch, Pierce, Fenner & Smith
Incorporated

J.P. Morgan Securities Inc.

Adams, Harkness & Hill, Inc.

Needham & Company, Inc.

as Representatives of the several Underwriters

c/o Merrill Lynch & Co.

Merrill Lynch, Pierce, Fenner & Smith Incorporated

4 World Financial Center

New York, New York 10080

Ladies and Gentlemen:

MKS Instruments, Inc., a Massachusetts corporation (the "Company"), and the persons listed in Schedule B hereto (the "Selling Shareholders"), confirm their respective agreements with Merrill Lynch & Co., Merrill Lynch, Pierce, Fenner & Smith Incorporated ("Merrill Lynch") and each of the other Underwriters named in Schedule A hereto (collectively, the "Underwriters", which term shall also include any underwriter substituted as hereinafter provided in Section 10 hereof), for whom Merrill Lynch, J.P Morgan Securities, Inc., Adams, Harkness & Hill, Inc. and Needham & Company, Inc. are acting as representatives (in such capacity, the "Representatives"), with respect to (i) the sale by the Company and the Selling Shareholders, acting severally and not jointly, and the purchase by the Underwriters, acting severally and not jointly, of the respective numbers of shares of Common Stock, no par value per share, of the Company ("Common Stock") set forth in Schedules A and B hereto and (ii) the grant by the Company and the Selling Shareholders to the Underwriters, acting severally and not jointly, of the option described in Section 2(b) hereof to purchase all or any part of 600,000 additional shares of Common Stock to cover overallotments, if any. The aforesaid 4,000,000 shares of Common Stock (the "Initial Securities") to be purchased by the Underwriters and all or any part of the 600,000 shares of Common Stock subject to the option described in Section 2(b) hereof (the "Option Securities") are hereinafter called, collectively, the "Securities".

The Company and the Selling Shareholders understand that the Underwriters propose to make a public offering of the Securities as soon as the Representatives deem advisable after this Agreement has been executed and delivered.

The Company has filed with the Securities and Exchange Commission (the "Commission") registration statements on Form S-3 (Nos. 333-34450 and 333-109753), including the related preliminary prospectus or prospectuses covering the registration of the Securities under the Securities Act of 1933, as amended (the "1933 Act"). Promptly after execution and delivery of this Agreement, the Company will prepare and file a prospectus and a prospectus supplement in accordance with the provisions of Rule 430A ("Rule 430A") of the rules and regulations of the Commission under the 1933 Act (the "1933 Act Regulations") and paragraph (b) of Rule 424 ("Rule 424(b)") of the 1933 Act Regulations. The information included in such prospectus and prospectus supplement that was omitted from such registration statements at the time they became effective but that is deemed to be part of such registration statements at the time they became effective pursuant to paragraph (b) of Rule 430A is referred to as "Rule 430A Information." Each prospectus used before such registration statements became effective, and any prospectus (including prospectus supplements) that omitted the Rule 430A Information, that was used after such effectiveness and prior to the execution and delivery of this Agreement, is herein called a "preliminary prospectus." The term "Registration Statement" as used herein shall mean such registration statements, including the respective exhibits and any schedules thereto, at the time they became effective, and including the documents incorporated by reference therein pursuant to Item 12 of Form S-3 under the 1933 Act and the Rule 430A Information. Any registration statement filed pursuant to Rule 462(b) of the 1933 Act Regulations is herein referred to as the "Rule 462(b) Registration Statement," and after such filing the term "Registration Statement" shall include the Rule 462(b) Registration Statement. The final prospectus and the final prospectus supplement in the forms first furnished to the Underwriters for use in connection with the offering of the Securities, including the documents incorporated by reference therein pursuant to Item 12 of Form S-3 under the 1933 Act at the time of the execution of this Agreement, are collectively referred to herein as the "Prospectus." For purposes of this Agreement, all references to the Registration Statement, any preliminary prospectus, the Prospectus or any amendment or supplement to any of the foregoing shall be deemed to include the copy filed with the Commission pursuant to its Electronic Data Gathering, Analysis and Retrieval system ("EDGAR").

All references in this Agreement to financial statements and schedules and other information which is "contained," "included" or "stated" in the Registration Statement, any preliminary prospectus or the Prospectus (or other references of like import) shall be deemed to mean and include all such financial statements and schedules and other information which is incorporated by reference in the Registration Statement, any preliminary prospectus or the Prospectus, as the case may be; and all references in this Agreement to amendments or supplements to the Registration Statement, any preliminary prospectus or the Prospectus shall be deemed to mean and include the filing of any document under the Securities Exchange Act of 1934 (the "1934 Act") which is incorporated by reference in the Registration Statement, such preliminary prospectus or the Prospectus, as the case may be.

SECTION 1. Representations and Warranties.

(a) Representations and Warranties by the Company. The Company represents and warrants to each Underwriter as of the date hereof, as of the Closing Time referred to in Section 2(c) hereof, and as of each Date of Delivery (if any) referred to in Section 2(b) hereof, and agrees with each Underwriter, as follows:

(i) Compliance with Registration Requirements. The Company meets the requirements for use of Form S-3 under the 1933 Act. The Registration Statement and any post-effective amendment thereto has become effective under the 1933 Act and no stop order suspending the effectiveness of the Registration Statement or any post-effective amendment thereto has been issued under the 1933 Act and no proceedings for that purpose have been instituted or are pending or, to the knowledge of the Company, are contemplated by the

Commission, and any request on the part of the Commission for additional information has been complied with.

At the respective times the Registration Statement, any Rule 462(b) Registration Statement and any post-effective amendments thereto became effective and at the Closing Time (and, if any Option Securities are purchased, at the Date of Delivery), the Registration Statement and any amendments and supplements thereto complied and will comply in all material respects with the requirements of the 1933 Act and the 1933 Act Regulations and did not and will not contain an untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein not misleading. Neither the Prospectus nor any amendments or supplements thereto, at the time the Prospectus or any such amendment or supplement was issued and at the Closing Time (and, if any Option Securities are purchased, at the Date of Delivery), included or will include an untrue statement of a material fact or omitted or will omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading. The representations and warranties in this subsection shall not apply to statements in or omissions from the Registration Statement or Prospectus made in reliance upon and in conformity with written information furnished to the Company by any Underwriter through the Representatives expressly for use in the Registration Statement (or any amendment thereto) or the Prospectus (or any amendment or supplement thereto).

Each preliminary prospectus and the prospectus filed as part of the Registration Statement as originally filed or as part of any amendment thereto complied when so filed in all material respects with the 1933 Act Regulations and each preliminary prospectus and the Prospectus delivered to the Underwriters for use in connection with this offering was identical to the electronically transmitted copies thereof filed with the Commission pursuant to EDGAR, except to the extent permitted by Regulation S-T.

(ii) Incorporated Documents. The documents incorporated or deemed to be incorporated by reference in the Registration Statement and the Prospectus, when they became effective or at the time they were or hereafter are filed with the Commission, complied and will comply in all material respects with the requirements of the 1934 Act and the rules and regulations of the Commission thereunder (the "1934 Act Regulations").

(iii) Independent Accountants. The accountants who certified the financial statements and the supporting schedules, if any, included in the Registration Statement are independent public accountants as required by the 1933 Act and the 1933 Act Regulations.

(iv) Financial Statements. The financial statements included in the Registration Statement and the Prospectus, together with the related schedules and notes, present fairly in all material respects the financial position of the Company and its consolidated subsidiaries at the dates indicated and the statement of operations, stockholders' equity and cash flows of the Company and its consolidated subsidiaries for the periods specified; said financial statements have been prepared in conformity with generally accepted accounting principles ("GAAP") applied on a consistent basis throughout the periods involved. The supporting schedules, if any, included in the Registration Statement present fairly in accordance with GAAP the information required to be stated therein. The selected financial data and the summary financial information included in the Prospectus present fairly in all material respects the information shown therein and have been compiled on a basis consistent with that of the audited financial statements included in the Registration Statement. The pro forma financial information included in the Registration Statement and the Prospectus present fairly in all material respects the information

shown therein, have been prepared in accordance with the Commission's rules and guidelines with respect to pro forma financial statements and have been properly compiled on the bases described therein, and the assumptions used in the preparation thereof are reasonable and the adjustments used therein are appropriate to give effect to the transactions and circumstances referred to therein. The Company has previously delivered to Merrill Lynch the consolidated balance sheet of the Company and its consolidated subsidiaries as of November 30, 2003 and the related statements of operations of the Company and the consolidated subsidiaries for each of the one-month periods ended October 31, 2003 and November 30, 2003, respectively (collectively, the "Monthly Financial Statements"). The Monthly Financial Statements represent fairly, in all material respects, as of their respective dates, the financial position of the Company and its consolidated subsidiaries at the dates indicated and the statement of operations of the Company and its consolidated subsidiaries for the periods specified. The Monthly Financial Statements have been prepared on a basis consistent with past practice for comparable periods.

(v) No Material Adverse Change in Business. Since the respective dates as of which information is given in the Registration Statement and the Prospectus, except as otherwise stated therein, (A) there has been no material adverse change in the condition, financial or otherwise, or in the earnings, business affairs or business prospects of the Company and its subsidiaries considered as one enterprise, whether or not arising in the ordinary course of business (a "Material Adverse Effect"), (B) there have been no transactions entered into by the Company or any of its subsidiaries, other than those in the ordinary course of business, which are material with respect to the Company and its subsidiaries considered as one enterprise, and (C) there has been no dividend or distribution of any kind declared, paid or made by the Company on any class of its capital stock.

(vi) Good Standing of the Company. The Company has been duly organized and is validly existing as a corporation in good standing under the laws of the Commonwealth of Massachusetts and has corporate power and authority to own, lease and operate its properties and to conduct its business as described in the Prospectus and to enter into and perform its obligations under this Agreement; and the Company is duly qualified as a foreign corporation to transact business and is in good standing in each other jurisdiction in which such qualification is required, whether by reason of the ownership or leasing of property or the conduct of business, except where the failure so to qualify or to be in good standing would not result in a Material Adverse Effect.

(vii) Good Standing of Subsidiaries. Applied Science and Technology, Inc. and ENI Technology, Inc. (each a "Subsidiary" and, collectively, the "Subsidiaries") are the only subsidiaries of the Company, other than MKS Japan, Inc., whose individual revenues at September 30, 2003 exceeded 10% of the consolidated revenues of the Company from sales to customers unaffiliated with the Company. Each of the Subsidiaries has been duly organized and is validly existing as a corporation in good standing under the laws of the jurisdiction of its incorporation, has corporate power and authority to own, lease and operate its properties and to conduct its business as described in the Prospectus and is duly qualified as a foreign corporation to transact business and is in good standing in each jurisdiction in which such qualification is required, whether by reason of the ownership or leasing of property or the conduct of business, except where the failure so to qualify or to be in good standing would not result in a Material Adverse Effect; except as otherwise disclosed in the Registration Statement, all of the issued and outstanding capital stock of each such Subsidiary has been duly authorized and validly issued, is fully paid and non-assessable and is owned by the Company, directly or through subsidiaries, free and clear of any security interest, mortgage, pledge, lien, encumbrance, claim or equity; none of the outstanding shares of capital stock of any Subsidiary was issued in violation of the preemptive

or similar rights of any securityholder of such Subsidiary. The only subsidiaries of the Company are the subsidiaries listed on Schedule D hereto.

(viii) Capitalization. The authorized, issued and outstanding capital stock of the Company as of September 30, 2003, was as set forth in the Prospectus in the column entitled "Actual" under the caption "Capitalization." There have been no issuances subsequent to September 30, 2003 other than pursuant to this Agreement, pursuant to reservations, agreements or employee benefit plans referred to in the Prospectus or pursuant to the exercise of convertible securities or options referred to in the Prospectus. The shares of issued and outstanding capital stock of the Company, including the Securities to be purchased by the Underwriters from the Selling Shareholders, have been duly authorized and validly issued and are fully paid and non-assessable; none of the outstanding shares of capital stock, including the Securities to be purchased by the Underwriters from the Selling Shareholders, was issued in violation of the preemptive or other similar rights of any securityholder of the Company.

(ix) Authorization of Agreement. This Agreement has been duly authorized, executed and delivered by the Company.

(x) Authorization and Description of Securities. The Securities to be purchased by the Underwriters from the Company have been duly authorized for issuance and sale to the Underwriters pursuant to this Agreement and, when issued and delivered by the Company pursuant to this Agreement against payment of the consideration set forth herein, will be validly issued, fully paid and non-assessable; the Common Stock conforms to all statements relating thereto contained in the Prospectus and such description conforms to the rights set forth in the instruments defining the same; no holder of the Securities will be subject to personal liability by reason of being such a holder; and the issuance of the Securities is not subject to the preemptive or other similar rights of any securityholder of the Company.

(xi) Absence of Defaults and Conflicts. Neither the Company nor any of its subsidiaries is in violation of its charter or by-laws or in default in the performance or observance of any obligation, agreement, covenant or condition contained in any contract, indenture, mortgage, deed of trust, loan or credit agreement, note, lease or other agreement or instrument to which the Company or any of its subsidiaries is a party or by which it or any of them may be bound, or to which any of the property or assets of the Company or any subsidiary is subject (collectively, "Agreements and Instruments") except for such defaults that would not result in a Material Adverse Effect; and the execution, delivery and performance of this Agreement and the consummation of the transactions contemplated herein and in the Registration Statement (including the issuance and sale of the Securities and the use of the proceeds from the sale of the Securities as described in the Prospectus under the caption "Use of Proceeds") and compliance by the Company with its obligations hereunder have been duly authorized by all necessary corporate action and do not and will not, whether with or without the giving of notice or passage of time or both, conflict with or constitute a breach of, or default or Repayment Event (as defined below) under, or result in the creation or imposition of any lien, charge or encumbrance upon any property or assets of the Company or any subsidiary pursuant to, the Agreements and Instruments (except for such conflicts, breaches, defaults or Repayment Events or liens, charges or encumbrances that would not result in a Material Adverse Effect), nor will such action result in any violation of the provisions of the charter or by-laws of the Company or any Subsidiary or any applicable law, statute, rule, regulation, judgment, order, writ or decree of any government, government instrumentality or court, domestic or foreign, having jurisdiction over the Company or any Subsidiary or any of their assets, properties or operations. As used herein, a "Repayment Event" means any event or condition which gives the holder of any note, debenture or other

evidence of indebtedness (or any person acting on such holder's behalf) the right to require the repurchase, redemption or repayment of all or a portion of such indebtedness by the Company or any subsidiary.

(xii) Absence of Labor Dispute. No labor dispute with the employees of the Company or any Subsidiary exists or, to the knowledge of the Company, is imminent, and the Company is not aware of any existing or imminent labor disturbance by the employees of any of its or any Subsidiary's principal suppliers, manufacturers, customers or contractors, which, in either case, would result in a Material Adverse Effect.

(xiii) Absence of Proceedings. There is no action, suit, proceeding, inquiry or investigation before or brought by any court or governmental agency or body, domestic or foreign, now pending, or, to the knowledge of the Company, threatened, against or affecting the Company or any subsidiary, which is required to be disclosed in the Registration Statement (other than as disclosed therein), or which would result in a Material Adverse Effect, or which would materially and adversely affect the properties or assets of the Company and its subsidiaries considered as one enterprise or the consummation of the transactions contemplated in this Agreement or the performance by the Company of its obligations hereunder; the aggregate of all pending legal or governmental proceedings to which the Company or any subsidiary is a party or of which any of their respective property or assets is the subject which are not described in the Registration Statement, including ordinary routine litigation incidental to the business, would not result in a Material Adverse Effect.

(xiv) Accuracy of Exhibits. There are no contracts or documents which are required to be described in the Registration Statement or the Prospectus or to be filed as exhibits thereto which have not been so described and filed as required.

(xv) Possession of Intellectual Property. The Company and its subsidiaries own or possess, or can acquire on reasonable terms, adequate patents, patent rights, licenses, inventions, copyrights, know-how (including trade secrets and other unpatented and/or unpatentable proprietary or confidential information, systems or procedures), trademarks, service marks, trade names or other intellectual property (collectively, "Intellectual Property") necessary to carry on the business now operated by them, and neither the Company nor any of its subsidiaries has received any notice or is otherwise aware of any infringement of or conflict with asserted rights of others with respect to any Intellectual Property or of any facts or circumstances which would render any Intellectual Property invalid or inadequate to protect the interest of the Company or any of its subsidiaries therein, and which infringement or conflict (if the subject of any unfavorable decision, ruling or finding) or invalidity or inadequacy, singly or in the aggregate, would result in a Material Adverse Effect.

(xvi) Absence of Manipulation. Neither the Company nor, to the knowledge of the Company, any affiliate of the Company has taken, nor will the Company or any affiliate take, directly or indirectly, any action which is designed to or which has constituted or which would be expected to cause or result in stabilization or manipulation of the price of any security of the Company to facilitate the sale or resale of the Securities.

(xvii) Absence of Further Requirements. No filing with, or authorization, approval, consent, license, order, registration, qualification or decree of, any court or governmental authority or agency is necessary or required for the performance by the Company of its obligations hereunder, in connection with the offering, issuance or sale of the Securities hereunder or the consummation by the Company of the transactions contemplated by this

Agreement, except such as have been already obtained or as may be required under the 1933 Act or the 1933 Act Regulations and state securities or blue sky laws.

(xviii) Possession of Licenses and Permits. The Company and its subsidiaries possess such permits, licenses, approvals, consents and other authorizations (collectively, "Governmental Licenses") issued by the appropriate federal, state, local or foreign regulatory agencies or bodies necessary to conduct the business now operated by them, except where the failure to possess such Government Licenses would not, singly or in the aggregate, result in a Material Adverse Effect; the Company and its subsidiaries are in compliance with the terms and conditions of all such Governmental Licenses, except where the failure so to comply would not, singly or in the aggregate, result in a Material Adverse Effect; all of the Governmental Licenses are valid and in full force and effect, except when the invalidity of such Governmental Licenses or the failure of such Governmental Licenses to be in full force and effect would not, singly or in the aggregate, result in a Material Adverse Effect; and neither the Company nor any of its subsidiaries has received any notice of proceedings relating to the revocation or modification of any such Governmental Licenses which, singly or in the aggregate, if the subject of an unfavorable decision, ruling or finding, would result in a Material Adverse Effect.

(xix) Title to Property. The Company and its subsidiaries have good and marketable title to all real property owned by the Company and its subsidiaries and good title to all other properties owned by them, in each case, free and clear of all mortgages, pledges, liens, security interests, claims, restrictions or encumbrances of any kind except such as (a) are described in the Prospectus or (b) do not, singly or in the aggregate, materially affect the value of such property and do not interfere with the use made and proposed to be made of such property by the Company or any of its subsidiaries; and all of the leases and subleases material to the business of the Company and its subsidiaries, considered as one enterprise, and under which the Company or any of its subsidiaries holds properties described in the Prospectus, are in full force and effect, and neither the Company nor any subsidiary has any notice of any claim of any sort that has been asserted by anyone adverse to the rights of the Company or any subsidiary under any of the leases or subleases mentioned above, or affecting or questioning the rights of the Company or such subsidiary to the continued possession of the leased or subleased premises under any such lease or sublease, which claim, if the subject of an unfavorable decision, ruling or finding, would result in a Material Adverse Effect.

(xx) Investment Company Act. The Company is not required, and upon the issuance and sale of the Securities as herein contemplated and the application of the net proceeds therefrom as described in the Prospectus will not be required, to register as an "investment company" under the Investment Company Act of 1940, as amended (the "1940 Act").

(xxi) Environmental Laws. Except as described in the Registration Statement and except as would not, singly or in the aggregate, result in a Material Adverse Effect, (A) neither the Company nor any of its subsidiaries is in violation of any federal, state, local or foreign statute, law, rule, regulation, ordinance, code, policy or rule of common law or any judicial or administrative interpretation thereof, including any judicial or administrative order, consent, decree or judgment, relating to pollution or protection of human health, the environment (including, without limitation, ambient air, surface water, groundwater, land surface or subsurface strata) or wildlife, including, without limitation, laws and regulations relating to the release or threatened release of chemicals, pollutants, contaminants, wastes, toxic substances, hazardous substances, petroleum or petroleum products, asbestos-containing materials or mold (collectively, "Hazardous Materials") or to the manufacture, processing, distribution, use, treatment, storage, disposal, transport or handling of Hazardous Materials (collectively, "Environmental Laws"), (B)

the Company and its subsidiaries have all permits, authorizations and approvals required under any applicable Environmental Laws and are each in compliance with their requirements, (C) there are no pending or threatened administrative, regulatory or judicial actions, suits, demands, demand letters, claims, liens, notices of noncompliance or violation, investigation or proceedings relating to any Environmental Law against the Company or any of its subsidiaries, and (D) there are no events or circumstances that would reasonably be expected to form the basis of an order for clean-up or remediation, or an action, suit or proceeding by any private party or governmental body or agency, against or affecting the Company or any of its subsidiaries relating to Hazardous Materials or any Environmental Laws.

(xxii) No Applicable Registration or Other Similar Rights. There are no persons with registration rights or other similar rights to have any equity or debt securities registered for sale under the Registration Statement or included in the offering contemplated by this Agreement, except for such rights relating to Securities to be sold hereunder or such rights as have been duly waived.

(xxiii) Compliance with the Sarbanes Oxley Act. The Company is in compliance in all material respects with all presently applicable provisions of the Sarbanes Oxley Act of 2002.

(b) Representations and Warranties by the Selling Shareholders. Each Selling Shareholder severally represents and warrants to each Underwriter as of the date hereof, as of the Closing Time, and, if the Selling Shareholder is selling Option Securities on a Date of Delivery, as of each such Date of Delivery, and agrees with each Underwriter, as set forth below; provided that (X) Emerson Electric Co. ("Emerson") makes no representations or warranties with respect to the matters set forth in subsections (ii) and (vii) below; and (Y) John R. Bertucci and Claire R. Bertucci make no representations or warranties with respect to the matters set forth in subsections (iv) and (vi) below:

(i) Authorization of this Agreement. This Agreement has been duly authorized, executed and delivered by or on behalf of such Selling Shareholder.

(ii) Authorization of Power of Attorney and Custody Agreement. Each of the Power of Attorney and the Custody Agreement, in the form heretofore furnished to the Representatives (together, the "Power of Attorney and Custody Agreement"), has been duly authorized, executed and delivered by such Selling Shareholder and, assuming the due authorization, execution and delivery by the other parties thereto, is the valid and binding agreement of such Selling Shareholder.

(iii) Noncontravention. The execution and delivery of this Agreement and the Power of Attorney and Custody Agreement and the sale and delivery of the Securities to be sold by such Selling Shareholder and the consummation of the transactions contemplated herein and compliance by such Selling Shareholder with its obligations hereunder do not and will not, whether with or without the giving of notice or passage of time or both, conflict with or constitute a breach of, or default under, or result in the creation or imposition of any tax, lien, charge or encumbrance upon the Securities to be sold by such Selling Shareholder pursuant to any contract, indenture, mortgage, deed of trust, loan or credit agreement, note, license, lease or other agreement or instrument to which such Selling Shareholder is a party or by which such Selling Shareholder may be bound, or to which any of the property or assets of such Selling Shareholder

is subject (except for such conflicts, breaches or defaults that would not adversely affect such Selling Shareholder's ability to fulfill his, her or its obligations hereunder or, if applicable, under the Power of Attorney and Custody Agreement), nor will such action result in any violation of the provisions of the charter or by-laws or other organizational instrument of such Selling Shareholder, if applicable, or any applicable treaty, law, statute, rule, regulation, judgment, order, writ or decree of any government, government instrumentality or court, domestic or foreign, having jurisdiction over such Selling Shareholder or any of its properties (except for violations of any treaty, law, statute, rule, regulation, judgment, order, writ or decree that would not adversely affect such Selling Shareholder's ability to fulfill his, her or its obligations hereunder or, if applicable, under the Power of Attorney and Custody Agreement).

(iv) Certificates Suitable for Transfer. The Securities to be sold by such Selling Shareholder pursuant to this Agreement are certificated securities in registered form and are not held in any securities account or by or through any securities intermediary within the meaning of the Uniform Commercial Code as in effect in the State of New York (the "UCC"). Certificates for all of the Securities to be sold by such Selling Shareholder pursuant to this Agreement, in suitable form for transfer by delivery or accompanied by duly executed instruments of transfer or assignment in blank with signatures guaranteed, will have been provided to the Company's transfer agent promptly after the date hereof, with instructions to deliver such Securities to the Underwriters at Closing Time.

(v) Valid Title. Such Selling Shareholder has, and at the Closing Time (and, if any Option Securities are sold, at the Date of Delivery) will have, valid title to the Securities to be sold by such Selling Shareholder free and clear of all security interests, claims, liens, equities or other encumbrances and the legal right and power, and all authorization and approval required by law, to enter into this Agreement and, if applicable, the Power of Attorney and Custody Agreement and to sell, transfer and deliver the Securities to be sold by such Selling Shareholder or, if such Securities are not certificated, a valid security entitlement in respect of such Securities.

(vi) Delivery of Certificated Securities. Upon the Underwriters' acquiring possession of the Securities to be sold by such Selling Shareholder and paying the purchase price therefor pursuant to this Agreement, the Underwriters (assuming that no such Underwriter has notice of any "adverse claim", within the meaning of Section 8-105 of the New York Uniform Commercial Code, to such Securities) will acquire their respective interests in such Securities (including, without limitation, all rights that such Selling Shareholder had or has the power to transfer in such Securities) free and clear of any adverse claim within the meaning of Section 8-102 of the New York Uniform Commercial Code.

(vii) Delivery of Uncertificated Securities. Upon payment of the purchase price for the Securities to be sold by such Selling Shareholder pursuant to this Agreement, delivery of such Securities, as directed by the Underwriters, to Cede & Co. ("Cede") or such other nominee as may be designated by The Depository Trust Company ("DTC") (unless delivery of such Securities is unnecessary because such Securities are already in possession of Cede or such nominee), registration of such Securities in the name of Cede or such other nominee (unless registration of such Securities is unnecessary because such Securities are already registered in the name of Cede or such nominee), and the crediting of such Securities on the books of DTC to securities accounts of the Underwriters (assuming that neither DTC nor any such Underwriter has notice of any "adverse claim", within the meaning of Section 8-105 of the New York Uniform Commercial Code (the "UCC"), to such Securities), (A) DTC shall be a "protected purchaser", within the meaning of Section 8-303 of the UCC, of such Securities and will acquire its interest in the Securities (including, without limitation, all rights that such Selling Shareholder had or has

the power to transfer in such Securities) free and clear of any adverse claim within the meaning of Section 8-102 of the UCC, (B) under Section 8-501 of the UCC, the Underwriters will acquire a valid security entitlement in respect of such Securities, and (C) no action (whether framed in conversion, replevin, constructive trust, equitable lien, or other theory) based on any "adverse claim", within the meaning of Section 8-102 of the UCC, to such Securities may be asserted against the Underwriters with respect to such security entitlement; for purposes of this representation, such Selling Shareholder may assume that when such payment, delivery (if necessary) and crediting occur, (x) such Securities will have been registered in the name of Cede or another nominee designated by DTC, in each case on the Company's share registry in accordance with its certificate of incorporation, bylaws and applicable law, (y) DTC will be registered as a "clearing corporation", within the meaning of Section 8-102 of the UCC, and (z) appropriate entries to the accounts of the several Underwriters on the records of DTC will have been made pursuant to the UCC.

(viii) Absence of Manipulation. Such Selling Shareholder has not taken, and will not take, directly or indirectly, any action which is designed to or which has constituted or which would be expected to cause or result in stabilization or manipulation of the price of any security of the Company to facilitate the sale or resale of the Securities.

(ix) Absence of Further Requirements. No filing with, or consent, approval, authorization, order, registration, qualification or decree of, any court or governmental authority or agency, domestic or foreign, is necessary or required for the performance by such Selling Shareholder of its obligations hereunder or, if applicable, under the Power of Attorney and Custody Agreement, or in connection with the sale and delivery of the Securities hereunder or the consummation of the transactions contemplated by this Agreement, except such as may have previously been made or obtained or as may be required under the 1933 Act or the 1933 Act Regulations or state securities laws.

(x) Restriction on Sale of Securities. Such Selling Shareholder will comply with the terms of the lock-up agreement executed by such Selling Shareholder in connection with the offering contemplated by this Agreement.

(xi) No Association with NASD. Neither such Selling Shareholder nor any of such Selling Shareholder's affiliates directly, or indirectly through one or more intermediaries, controls, or is controlled by, or is under common control with, or is a person associated with (within the meaning of Article I (dd) of the By-laws of the National Association of Securities Dealers, Inc. (the "NASD")), any member firm of the NASD.

(xii) Waiver of Registration Rights. Such Selling Shareholder hereby waives any rights such Selling Shareholder may have, pursuant to any registration rights agreement or otherwise, to include for resale in the offering contemplated by this Agreement any securities of the Company held by such Selling Shareholder. The foregoing sentence shall not apply to the Securities to be sold hereunder.

(c) Representations and Warranties by the Management Selling Shareholder. In addition to the representations and warranties set forth in Section 1(b) hereof, John R. Bertucci (the "Management Selling Shareholder") further represents and warrants to each Underwriter as of the date hereof, as of the Closing Time, and, if such Management Selling Shareholder is selling Option Securities on a Date of Delivery, as of each such Date of Delivery, and agrees with each Underwriter as follows:

(i) Accurate Disclosure. To the knowledge of such Selling Shareholder, the representations and warranties of the Company contained in Section 1(a) hereof are true and correct; such Selling Shareholder has reviewed and is familiar with the Registration Statement and the Prospectus and, to the knowledge of such Selling Shareholder, neither the Prospectus nor any amendments or supplements thereto includes any untrue statement of a material fact or omits to state a material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading.

(d) Officer's Certificates. Any certificate signed by any officer of the Company or any of its subsidiaries delivered to the Representatives or to counsel for the Underwriters shall be deemed a representation and warranty by the Company to each Underwriter as to the matters covered thereby; and any certificate signed by or on behalf of a Selling Shareholder as such and delivered to the Representatives or to counsel for the Underwriters pursuant to the terms of this Agreement shall be deemed a representation and warranty by such Selling Shareholder to the Underwriters as to the matters covered thereby.

SECTION 2. Sale and Delivery to Underwriters; Closing.

(a) Initial Securities. On the basis of the representations and warranties herein contained and subject to the terms and conditions herein set forth, the Company and each Selling Shareholder, severally and not jointly, agree to sell to each Underwriter, severally and not jointly, and each Underwriter, severally and not jointly, agrees to purchase from the Company and each Selling Shareholder, at the price per share set forth in Schedule C, that proportion of the number of Initial Securities set forth in Schedule B opposite the name of the Company or such Selling Shareholder, as the case may be, which the number of Initial Securities set forth in Schedule A opposite the name of such Underwriter, plus any additional number of Initial Securities which such Underwriter may become obligated to purchase pursuant to the provisions of Section 10 hereof, bears to the total number of Initial Securities, subject, in each case, to such adjustments among the Underwriters as the Representatives in their sole discretion shall make to eliminate any sales or purchases of fractional securities.

(b) Option Securities. In addition, on the basis of the representations and warranties herein contained and subject to the terms and conditions herein set forth, the Company and the Selling Shareholders, acting severally and not jointly, hereby grant an option to the Underwriters, severally and not jointly, to purchase up to an additional 600,000 shares of Common Stock, as set forth in Schedule B, at the price per share set forth in Schedule C, less an amount per share equal to any dividends or distributions declared by the Company and payable on the Initial Securities but not payable on the Option Securities. The option hereby granted will expire 30 days after the date hereof and may be exercised in whole or in part from time to time only for the purpose of covering overallotments which may be made in connection with the offering and distribution of the Initial Securities upon notice by Merrill Lynch to the Company and the Selling Shareholders setting forth the number of Option Securities as to which the several Underwriters are then exercising the option and the time and date of payment and delivery for such Option Securities. Any such time and date of delivery (a "Date of Delivery") shall be determined by Merrill Lynch, but shall not be later than seven full business days after the exercise of said option, nor in any event prior to the Closing Time, as hereinafter defined. If the option is exercised as to all or any portion of the Option Securities, each of the Underwriters, acting severally and not jointly, will purchase that proportion of the total number of Option Securities then being purchased which the number of Initial Securities set forth in Schedule A opposite the name of such Underwriter bears to the total number of Initial Securities, subject in each case to such adjustments as Merrill Lynch in its discretion shall make to eliminate any sales or purchases of fractional shares.

(c) Payment. Payment of the purchase price for, and delivery of certificates for, the Initial Securities shall be made at the offices of Hale and Dorr LLP, 60 State Street, Boston, MA 02109, or at such other place as shall be agreed upon by the Representatives and the Company and the Selling Shareholders, at 9:00 A.M. (Eastern time) on the third (fourth, if the pricing occurs after 4:30 P.M. (Eastern time) on any given day) business day after the date hereof (unless postponed in accordance with the provisions of Section 10), or such other time not later than ten business days after such date as shall be agreed upon by the Representatives and the Company and the Selling Shareholders (such time and date of payment and delivery being herein called "Closing Time").

In addition, in the event that any or all of the Option Securities are purchased by the Underwriters, payment of the purchase price for, and delivery of certificates for, such Option Securities shall be made at the above-mentioned offices, or at such other place as shall be agreed upon by the Representatives and the Company and the Selling Shareholders, on each Date of Delivery as specified in the notice from the Representatives to the Company and the Selling Shareholders.

Payment shall be made to the Company and the Selling Shareholders by wire transfer of immediately available funds to bank account(s) designated by the Company, Emerson and American Stock Transfer & Trust Company pursuant to applicable Selling Shareholders' Power of Attorney and Custody Agreements, as the case may be, against delivery to the Representatives for the respective accounts of the Underwriters of certificates for the Securities to be purchased by them. It is understood that each Underwriter has authorized the Representatives, for its account, to accept delivery of, receipt for, and make payment of the purchase price for, the Initial Securities and the Option Securities, if any, which it has agreed to purchase. Merrill Lynch, individually and not as representative of the Underwriters, may (but shall not be obligated to) make payment of the purchase price for the Initial Securities or the Option Securities, if any, to be purchased by any Underwriter whose funds have not been received by the Closing Time or the relevant Date of Delivery, as the case may be, but such payment shall not relieve such Underwriter from its obligations hereunder.

(d) Denominations; Registration. Certificates for the Initial Securities and the Option Securities, if any, shall be in such denominations and registered in such names as the Representatives may request in writing at least one full business day before the Closing Time or the relevant Date of Delivery, as the case may be. The certificates for the Initial Securities and the Option Securities, if any, will be made available for examination and packaging by the Representatives in The City of New York not later than 10:00 A.M. (Eastern time) on the business day prior to the Closing Time or the relevant Date of Delivery, as the case may be.

SECTION 3. Covenants of the Company. The Company covenants with each Underwriter as follows:

(a) Compliance with Securities Regulations and Commission Requests. The Company, subject to Section 3(b), will comply with the requirements of Rule 430A and will notify the Representatives immediately, and confirm the notice in writing, (i) when any post-effective amendment to the Registration Statement shall become effective, or any supplement to the Prospectus or any amended Prospectus shall have been filed, (ii) of the receipt of any comments from the Commission, (iii) of any request by the Commission for any amendment to the Registration Statement or any amendment or supplement to the Prospectus or any document incorporated by reference therein or for additional information, and (iv) of the issuance by the Commission of any stop order suspending the effectiveness of the Registration Statement or of any order preventing or suspending the use of any preliminary prospectus, or of the suspension of the qualification of the Securities for offering or sale in any jurisdiction, or of the initiation or threatening of any proceedings for any of such purposes. The Company will promptly effect the

filings necessary pursuant to Rule 424(b) and will take such steps as it deems necessary to ascertain promptly whether the form of prospectus transmitted for filing under Rule 424(b) was received for filing by the Commission and, in the event that it was not, it will promptly file such prospectus. The Company will make every reasonable effort to prevent the issuance of any stop order and, if any stop order is issued, to obtain the lifting thereof at the earliest possible moment.

(b) Filing of Amendments. The Company will give the Representatives notice of its intention to file or prepare any amendment to the Registration Statement (including any filing under Rule 462(b)) or any amendment, supplement or revision to either the prospectus included in the Registration Statement at the time it became effective or to the Prospectus, whether pursuant to the 1933 Act, the 1934 Act or otherwise, will furnish the Representatives with copies of any such documents a reasonable amount of time prior to such proposed filing or use, as the case may be, and will not file or use any such document to which the Representatives or counsel for the Underwriters shall reasonably object.

(c) Delivery of Registration Statements. The Company has furnished or will deliver to the Representatives and counsel for the Underwriters, without charge, signed copies of the Registration Statement as originally filed and of each amendment thereto (including exhibits filed therewith or incorporated by reference therein and documents incorporated or deemed to be incorporated by reference therein) and signed copies of all consents and certificates of experts, and will also deliver to the Representatives, without charge, a conformed copy of the Registration Statement as originally filed and of each amendment thereto (without exhibits) for each of the Underwriters. The copies of the Registration Statement and each amendment thereto furnished to the Underwriters will be identical to the electronically transmitted copies thereof filed with the Commission pursuant to EDGAR, except to the extent permitted by Regulation S-T.

(d) Delivery of Prospectuses. The Company has delivered to each Underwriter, without charge, as many copies of each preliminary prospectus as such Underwriter reasonably requested, and the Company hereby consents to the use of such copies for purposes permitted by the 1933 Act. The Company will furnish to each Underwriter during the period when the Prospectus is required to be delivered under the 1933 Act such number of copies of the Prospectus (as amended or supplemented) as such Underwriter may reasonably request. The costs of furnishing such copies of the Prospectus (and any amendments or supplements thereto) shall be borne by the Company with respect to any such documents furnished during the nine-month period following the date of this Agreement and shall be borne by the Underwriters thereafter. The Prospectus and any amendments or supplements thereto furnished to the Underwriters will be identical to the electronically transmitted copies thereof filed with the Commission pursuant to EDGAR, except to the extent permitted by Regulation S-T.

(e) Continued Compliance with Securities Laws. The Company will comply with the 1933 Act and the 1933 Act Regulations and the 1934 Act and the 1934 Act Regulations so as to permit the completion of the distribution of the Securities as contemplated in this Agreement and in the Prospectus. If at any time when a prospectus is required by the 1933 Act to be delivered in connection with sales of the Securities, any event shall occur or condition shall exist as a result of which it is necessary, in the reasonable opinion of counsel for the Underwriters or for the Company, to amend the Registration Statement or amend or supplement the Prospectus in order that the Prospectus will not include any untrue statements of a material fact or omit to state a material fact necessary in order to make the statements therein not misleading in the light of the circumstances existing at the time it is delivered to a purchaser, or if it shall be necessary, in the reasonable opinion of such counsel, at any such time to amend the Registration Statement or amend or supplement the Prospectus in order to comply with the requirements of the 1933 Act or

the 1933 Act Regulations, the Company will promptly prepare and file with the Commission, subject to Section 3(b), such amendment or supplement as may be necessary to correct such statement or omission or to make the Registration Statement or the Prospectus comply with such requirements, and the Company will furnish to the Underwriters such number of copies of such amendment or supplement as the Underwriters may reasonably request.

(f) Blue Sky Qualifications. The Company will use its best efforts, in cooperation with the Underwriters, to qualify the Securities for offering and sale under the applicable securities laws of such states and other jurisdictions (domestic or foreign) as the Representatives may designate and to maintain such qualifications in effect for a period of not less than one year from the later of the effective date of the Registration Statement; provided, however, that the Company shall not be obligated to file any general consent to service of process or to qualify as a foreign corporation or as a dealer in securities in any jurisdiction in which it is not so qualified or to subject itself to taxation in respect of doing business in any jurisdiction in which it is not otherwise so subject.

(g) Rule 158. The Company will timely file such reports pursuant to the 1934 Act as are necessary in order to make generally available to its securityholders as soon as practicable an earnings statement for the purposes of, and to provide the benefits contemplated by, the last paragraph of Section 11(a) of the 1933 Act.

(h) Use of Proceeds. The Company will use the net proceeds received by it from the sale of the Securities in the manner specified in the Prospectus under "Use of Proceeds".

(i) Listing. The Company will use its best efforts to effect and maintain the quotation of the Securities on the Nasdaq National Market.

(j) Restriction on Sale of Securities. During a period of 90 days from the date of the Prospectus, the Company will not, without the prior written consent of Merrill Lynch, (i) directly or indirectly, offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase or otherwise transfer or dispose of any share of Common Stock or any securities convertible into or exercisable or exchangeable for Common Stock or file any registration statement under the 1933 Act with respect to any of the foregoing or (ii) enter into any swap or any other agreement or any transaction that transfers, in whole or in part, directly or indirectly, the economic consequence of ownership of the Common Stock, whether any such swap or transaction described in clause (i) or (ii) above is to be settled by delivery of Common Stock or such other securities, in cash or otherwise. The foregoing sentence shall not apply to (A) the Securities to be sold hereunder, (B) any shares of Common Stock issued by the Company upon the exercise of an option or warrant or the conversion of a security outstanding on the date hereof and referred to in the Prospectus, (C) any shares of Common Stock issued or options to purchase Common Stock granted pursuant to existing employee benefit plans of the Company referred to in the Prospectus; (D) any shares of Common Stock of the Company issued in order to acquire assets or equity of one or more businesses, provided that such shares are subject in writing to the restrictions on sale set forth herein; or (E) any shares of Common Stock issued pursuant to collaborative, licensing or marketing arrangements, provided that such shares are subject in writing to the restrictions on sale set forth herein.

(k) Reporting Requirements. The Company, during the period when the Prospectus is required to be delivered under the 1933 Act, will file all documents required to be filed with the

Commission pursuant to the 1934 Act within the time periods required by the 1934 Act and the 1934 Act Regulations.

SECTION 4. Payment of Expenses.

(a) Expenses. The Company will pay or cause to be paid all expenses incident to the performance of their obligations under this Agreement, including (i) the preparation, printing and filing of the Registration Statement (including financial statements and exhibits) as originally filed and of each amendment thereto, (ii) the preparation, printing and delivery to the Underwriters of this Agreement, any Agreement among Underwriters and such other documents as may be required in connection with the offering, purchase, sale, issuance or delivery of the Securities, (iii) the preparation, issuance and delivery of the certificates for the Securities to the Underwriters, including any stock or other transfer taxes and any stamp or other duties payable upon the sale, issuance or delivery of the Securities to the Underwriters, (iv) the fees and disbursements of the Company's counsel, accountants and other advisors, (v) the qualification of the Securities under securities laws in accordance with the provisions of Section 3(g) hereof, including filing fees and the reasonable fees and disbursements of counsel for the Underwriters in connection therewith and in connection with the preparation of the Blue Sky Survey and any supplement thereto, (vi) the printing and delivery to the Underwriters of copies of each preliminary prospectus and of the Prospectus and any amendments or supplements thereto, (vii) the preparation, printing and delivery to the Underwriters of copies of the Blue Sky Survey and any supplement thereto; provided that such fees and disbursements shall not exceed \$2,000, (viii) the fees and expenses of any transfer agent or registrar for the Securities, (ix) the costs and expenses of the Company relating to investor presentations on any "road show" undertaken in connection with the marketing of the Securities, including without limitation, expenses associated with the production of road show slides and graphics, fees and expenses of any consultants engaged in connection with the road show presentations, travel and lodging expenses of the representatives and officers of the Company and any such consultants, and one-half of the cost of aircraft and other transportation chartered in connection with the road show and (x) the filing fees incident to, and the reasonable fees and disbursements of counsel to the Underwriters in connection with, the review by the NASD of the terms of the sale of the Securities, and (xi) the fees and expenses incurred in connection with the inclusion of the Securities in the Nasdaq National Market.

(b) Expenses of the Selling Shareholders. The Selling Shareholders will pay all expenses incident to the performance of their respective obligations under, and the consummation of the transactions contemplated by this Agreement, including (i) any stamp duties, capital duties and stock transfer taxes, if any, payable upon the sale of the Securities to the Underwriters, and their transfer between the Underwriters pursuant to an agreement between such Underwriters, and (ii) the fees and disbursements of their respective counsel and other advisors.

(c) Termination of Agreement. If this Agreement is terminated by the Representatives in accordance with the provisions of Section 5, Section 9(a)(i) or Section 11 hereof, the Company shall reimburse the Underwriters for all of their reasonable out-of-pocket expenses, including the reasonable fees and disbursements of counsel for the Underwriters.

(d) Allocation of Expenses. The provisions of this Section shall not affect any agreement that the Company and the Selling Shareholders may make for the sharing of such costs and expenses.

SECTION 5. Conditions of Underwriters' Obligations. The obligations of the several Underwriters hereunder are subject to the accuracy of the representations and warranties of the Company and the Selling Shareholders contained in Section 1 hereof or in certificates of any officer of the Company or any subsidiary of the Company or on behalf of any Selling Shareholder delivered pursuant to

the provisions hereof, to the performance by the Company of its covenants and other obligations hereunder, and to the following further conditions:

(a) Effectiveness of Registration Statement. The Registration Statement, including any Rule 462(b) Registration Statement, has become effective and at Closing Time no stop order suspending the effectiveness of the Registration Statement shall have been issued under the 1933 Act or proceedings therefor initiated or threatened by the Commission, and any request on the part of the Commission for additional information shall have been complied with to the reasonable satisfaction of counsel to the Underwriters. A prospectus containing the Rule 430A Information shall have been filed with the Commission in accordance with Rule 424(b) (or a post-effective amendment providing such information shall have been filed and declared effective in accordance with the requirements of Rule 430A).

(b) Opinion of Counsel for the Company and Certain of the Selling Shareholders. At Closing Time, the Representatives shall have received the favorable opinion, dated as of Closing Time, of Hale and Dorr LLP, counsel for the Company, in form and substance satisfactory to counsel for the Underwriters, together with signed or reproduced copies of such letter for each of the other Underwriters to the effect set forth in Exhibit A hereto.

(c) Opinion of Counsel for Emerson. At Closing Time, the Representatives shall have received the favorable opinion, dated as of Closing Time, of Harley Smith, in-house counsel for Emerson and Astec, in form and substance satisfactory to counsel for the Underwriters, together with signed or reproduced copies of such letter for each of the other Underwriters to the effect set forth in Exhibit B hereto.

(d) Opinion of Counsel for Underwriters. At Closing Time, the Representatives shall have received the favorable opinion, dated as of Closing Time, of Wilson Sonsini Goodrich & Rosati, Professional Corporation, counsel for the Underwriters, together with signed or reproduced copies of such letter for each of the other Underwriters with respect to the matters set forth in clauses (i), (ii), (v), (vi) (solely as to preemptive or other similar rights arising by operation of law or under the charter or by-laws of the Company), (viii) through (x), inclusive, (xii), (xiv) (solely as to the information in the Prospectus under "Description of Capital Stock") and the penultimate paragraph of Exhibit A hereto. In giving such opinion such counsel may rely, as to all matters governed by the laws of jurisdictions other than the law of the State of New York and the federal law of the United States, upon the opinions of counsel satisfactory to the Representatives. Such counsel may also state that, insofar as such opinion involves factual matters, they have relied, to the extent they deem proper, upon certificates of officers of the Company and its subsidiaries and certificates of public officials.

(e) Officers' Certificate. At Closing Time, there shall not have been, since the date hereof or since the respective dates as of which information is given in the Prospectus, any material adverse change in the condition, financial or otherwise, or in the earnings, business affairs or business prospects of the Company and its subsidiaries considered as one enterprise, whether or not arising in the ordinary course of business, and the Representatives shall have received a certificate of the Company signed by the President or a Vice President of the Company and of the chief financial or chief accounting officer of the Company, dated as of Closing Time, to the effect that (i) there has been no such material adverse change, (ii) the representations and warranties in Section 1(a) hereof are true and correct with the same force and effect as though expressly made at and as of Closing Time, (iii) the Company has complied with all agreements and satisfied all conditions on its part to be performed or satisfied at or prior to Closing Time, and (iv) no stop order suspending the effectiveness of the Registration Statement has been issued and no proceedings for that purpose have been instituted or are pending or, to their knowledge, contemplated by the Commission.

(f) Certificates of Selling Shareholders. At Closing Time, the Representatives shall have received certificates of each of Emerson and an Attorney-in-Fact on behalf of the other Selling Shareholders, dated as of Closing Time, to the effect that (i) the representations and warranties of such Selling Shareholder contained in Section 1(b) and, with respect to the Management Selling Shareholder, Section 1(c) hereof are true and correct in all respects with the same force and effect as though expressly made at and as of Closing Time and (ii) such Selling Shareholder has complied in all material respects with all agreements and all conditions on its part to be performed under this Agreement at or prior to Closing Time.

(g) Accountant's Comfort Letter. At the time of the execution of this Agreement, the Representatives shall have received from PricewaterhouseCoopers LLP a letter dated such date, in form and substance satisfactory to the Representatives, together with signed or reproduced copies of such letter for each of the other Underwriters containing statements and information of the type ordinarily included in accountants' "comfort letters" to underwriters with respect to the financial statements and certain financial information contained in the Registration Statement and the Prospectus.

(h) Bring-down Comfort Letter. At Closing Time, the Representatives shall have received from PricewaterhouseCoopers LLP a letter, dated as of Closing Time, to the effect that it reaffirms the statements made in the letter furnished pursuant to subsection (g) of this Section, except that the specified date referred to shall be a date not more than three business days prior to Closing Time.

(i) Approval of Listing. At Closing Time, the Securities shall have been approved for inclusion in the Nasdaq National Market, subject only to official notice of issuance.

(j) No Objection. The NASD has confirmed that it has not raised any objection with respect to the fairness and reasonableness of the underwriting terms and arrangements.

(k) Lock-up Agreements. At the date of this Agreement, the Representatives shall have received an agreement substantially in the form of Exhibit C hereto signed by the persons listed on Schedule E hereto; it being understood that the Management Selling Shareholder and Emerson shall have signed lock-up agreements in the forms previously provided to counsel for the Underwriters.

(l) Conditions to Purchase of Option Securities. In the event that the Underwriters exercise their option provided in Section 2(b) hereof to purchase all or any portion of the Option Securities, the representations and warranties of the Company and the Selling Shareholders contained herein and the statements in any certificates furnished by the Company, any subsidiary of the Company and the Selling Shareholders hereunder shall be true and correct as of each Date of Delivery and, at the relevant Date of Delivery, the Representatives shall have received:

(i) Officers' Certificate. A certificate, dated such Date of Delivery, of the Company signed by the President or a Vice President of the Company and of the chief financial or chief accounting officer of the Company confirming that the certificate delivered at the Closing Time pursuant to Section 5(e) hereof remains true and correct as of such Date of Delivery.

(ii) Certificates of Selling Shareholders. Certificates, each dated such Date of Delivery, of Emerson and an Attorney-in-Fact on behalf of the other Selling Shareholders confirming that the applicable certificates delivered at Closing Time pursuant to Section 5(f) remain true and correct as of such Date of Delivery.

(iii) Opinion of Counsel for the Company and Certain of the Selling Shareholders. The favorable opinion of Hale and Dorr LLP, counsel for the Company and certain of the Selling Shareholders, in form and substance satisfactory to counsel for the Underwriters, dated such Date of Delivery, relating to the Option Securities to be purchased on such Date of Delivery and otherwise to the same effect as the opinion required by Section 5(b) hereof.

(iv) Opinion of Counsel for Emerson. The favorable opinion of Harley Smith, in-house counsel for Emerson and Astec, in form and substance satisfactory to counsel for the Underwriters, dated such Date of Delivery, relating to the Option Securities to be purchased on such Date of Delivery and otherwise to the same effect as the opinion required by Section 5(c) hereof.

(v) Opinion of Counsel for Underwriters. The favorable opinion of Wilson Sonsini Goodrich & Rosati, Professional Corporation, counsel for the Underwriters, dated such Date of Delivery, relating to the Option Securities to be purchased on such Date of Delivery and otherwise to the same effect as the opinion required by Section 5(d) hereof.

(vi) Bring-down Comfort Letter. A letter from PricewaterhouseCoopers LLP, in form and substance satisfactory to the Representatives and dated such Date of Delivery, substantially in the same form and substance as the letter furnished to the Representatives pursuant to Section 5(g) hereof, except that the "specified date" in the letter furnished pursuant to this paragraph shall be a date not more than five days prior to such Date of Delivery.

(m) Additional Documents. At Closing Time and at each Date of Delivery counsel for the Underwriters shall have been furnished with such documents and opinions as they may require for the purpose of enabling them to pass upon the issuance and sale of the Securities as herein contemplated, or in order to evidence the accuracy of any of the representations or warranties, or the fulfillment of any of the conditions, herein contained; and all proceedings taken by the Company and the Selling Shareholders in connection with the issuance and sale of the Securities as herein contemplated shall be satisfactory in form and substance to the Representatives and counsel for the Underwriters.

(n) Termination of Agreement. If any condition specified in this Section shall not have been fulfilled when and as required to be fulfilled, this Agreement, or, in the case of any condition to the purchase of Option Securities on a Date of Delivery which is after the Closing Time, the obligations of the several Underwriters to purchase the relevant Option Securities, may be terminated by the Representatives by notice to the Company and the Selling Shareholders at any time at or prior to Closing Time or such Date of Delivery, as the case may be, and such termination shall be without liability of any party to any other party except as provided in Section 4 and except that Sections 1, 6, 7 and 8 shall survive any such termination and remain in full force and effect.

SECTION 6. Indemnification.

(a) Indemnification of Underwriters by the Company, Claire R. Bertucci and the Management Selling Shareholder. The Company, Claire R. Bertucci and the Management Selling Shareholder, jointly and severally, agree to indemnify and hold harmless each Underwriter, its affiliates, as such term is defined in Rule 501(b) under the 1933 Act (each, an "Affiliate"), its selling agents and each person, if any, who controls any Underwriter within the meaning of Section 15 of the 1933 Act or Section 20 of the 1934 Act as follows:

(i) against any and all loss, liability, claim, damage and expense whatsoever, as incurred, arising out of any untrue statement or alleged untrue statement of a material fact contained in the Registration Statement (or any amendment thereto), including the Rule 430A Information, or the omission or alleged omission therefrom of a material fact required to be stated therein or necessary to make the statements therein not misleading or arising out of any untrue statement or alleged untrue statement of a material fact included in any preliminary prospectus or the Prospectus (or any amendment or supplement thereto), or the omission or alleged omission therefrom of a material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading;

(ii) against any and all loss, liability, claim, damage and expense whatsoever, as incurred, to the extent of the aggregate amount paid in settlement of any litigation, or any investigation or proceeding by any governmental agency or body, commenced or threatened, or of any claim whatsoever based upon any such untrue statement or omission, or any such alleged untrue statement or omission; provided that (subject to Section 6(e) below) any such settlement is effected with the written consent of the Company and such Selling Shareholders;

(iii) against any and all expense whatsoever, as incurred (including the fees and disbursements of counsel chosen by Merrill Lynch), reasonably incurred in investigating, preparing or defending against any litigation, or any investigation or proceeding by any governmental agency or body, commenced or threatened, or any claim whatsoever based upon any such untrue statement or omission, or any such alleged untrue statement or omission, to the extent that any such expense is not paid under (i) or (ii) above;

provided, however, that (A) this indemnity agreement shall not apply to any loss, liability, claim, damage or expense to the extent arising out of any untrue statement or omission or alleged untrue statement or omission made in reliance upon and in conformity with written information furnished to the Company by any Underwriter through the Representatives expressly for use in the Registration Statement (or any amendment thereto), including the Rule 430A Information, or any preliminary prospectus or the Prospectus (or any amendment or supplement thereto); (B) the aggregate liability of the Management Selling Shareholder under the indemnity and contribution agreements contained in the provisions of this Section 6 and Section 7 hereof and for any breach of the representations and warranties of such Management Selling Shareholder set forth in Sections 1(b) and 1(c) hereof shall be limited to an amount equal to the net proceeds received by such Management Selling Shareholder from the offering of the Securities pursuant to this Agreement (before deducting expenses) and notwithstanding any other provision of this Section 6(a), any payment obligation of the Management Selling Shareholder under this Section 6(a) shall be limited to the amount of losses, claims, damages and liabilities (including interim reimbursement payments with respect thereto) that are not paid by the Company pursuant to this Section 6(a), and such payment shall not be required from the Management Selling Shareholder until after demand for payment has been made by the Underwriters first upon the Company and such payment is not made by the Company within thirty days after such demand; and (C) the aggregate liability of Claire R. Bertucci under the indemnity and contribution agreements contained in the provisions of this Section 6 and Section 7 hereof and for any breach of the representations and warranties of Claire R. Bertucci set forth in Section 1(b) hereof shall be limited to an amount equal to the net proceeds received by Claire R. Bertucci from the offering of the Securities pursuant to this Agreement (before deducting expenses) and notwithstanding any other provision of this Section 6(a), any payment obligation of Claire R. Bertucci under this Section 6(a) shall be limited to the amount of losses, claims, damages and liabilities (including interim reimbursement payments with respect thereto) that are not paid by the Company or the Management Selling Shareholder pursuant to this Section 6(a), and such payment shall not be required from Claire R. Bertucci until after demand for payment has been made by the Underwriters first upon the Company and such payment is not made within thirty days after such demand, and then upon the

Management Selling Shareholder pursuant to (B) above and such payment is not made within thirty days after the demand to the Management Shareholder; provided, further, however, that the foregoing indemnification agreement with respect to the Preliminary Prospectus shall not inure to the benefit of any Underwriter from whom the person asserting any such loss, claim, damage or liability purchased Securities, or any officers, employees, representatives, agents or controlling persons of such Underwriter, if (i) a copy of the Prospectus (as then amended or supplemented) was required by law to be delivered to such person at or prior to the written confirmation of the sale of Securities to such person, (ii) a copy of the Prospectus (as then amended or supplemented) excluding documents incorporated by reference therein was not sent or given to such person by or on behalf of such Underwriter and such failure was not due to non-compliance by the Company with Section 3(d) hereof, and (iii) the Prospectus (as so amended or supplemented) would have cured the defect giving rise to such loss, claim, damage or liability.

(b) Indemnification of Underwriters by Emerson Electric Co.

Emerson, severally and not jointly, agrees to indemnify and hold harmless each Underwriter, its Affiliates and selling agents and each person, if any, who controls any Underwriter within the meaning of Section 15 of the 1933 Act or Section 20 of the 1934 Act to the extent and in the manner set forth in clauses (a)(i), (ii) and (iii) above; provided, however, that this provision shall apply only with respect to untrue statements or omissions, or alleged untrue statements or omissions, made in the Registration Statement (or any amendment thereto), including the Rule 430A Information, or any preliminary prospectus or the Prospectus (or any amendment or supplement thereto) in reliance upon and in conformity with written information furnished to the Company or the Underwriters by Emerson expressly for use in the Registration Statement (or any amendment thereto) or such preliminary prospectus or the Prospectus (or any amendment or supplement thereto); provided, further, that the aggregate liability of Emerson under the indemnity and contribution agreements contained in the provisions of this Section 6 and Section 7 hereof and for any breach of the representations and warranties of Emerson set forth in Section 1(b) hereof shall be limited to an amount equal to the net proceeds received by Emerson from the offering of the Securities pursuant to this Agreement (before deducting expenses).

(c) Indemnification of Company, Directors and Officers and Selling Shareholders.

Each Underwriter severally agrees to indemnify and hold harmless the Company, its directors, each of its officers who signed the Registration Statement, and each person, if any, who controls the Company within the meaning of Section 15 of the 1933 Act or Section 20 of the 1934 Act, and each Selling Shareholder and each person, if any, who controls any Selling Shareholder within the meaning of Section 15 of the 1933 Act or Section 20 of the 1934 Act against any and all loss, liability, claim, damage and expense described in the indemnity contained in subsection (a) of this Section, as incurred, but only with respect to untrue statements or omissions, or alleged untrue statements or omissions, made in the Registration Statement (or any amendment thereto), including the Rule 430A Information, or any preliminary prospectus or the Prospectus (or any amendment or supplement thereto) in reliance upon and in conformity with written information furnished to the Company by such Underwriter through Merrill Lynch expressly for use in the Registration Statement (or any amendment thereto) or such preliminary prospectus or the Prospectus (or any amendment or supplement thereto).

(d) Actions against Parties; Notification.

Each indemnified party shall give notice as promptly as reasonably practicable to each indemnifying party of any action commenced against it in respect of which indemnity may be sought hereunder, but failure to so notify an indemnifying party shall not relieve such indemnifying party from any liability hereunder to the extent it is not materially prejudiced as a result thereof and in any event shall not relieve it from any liability which it may have otherwise than on account of this indemnity agreement. The indemnifying party, upon request of the indemnified party, shall retain counsel reasonably satisfactory to the indemnified party to represent the indemnified party and any others the indemnified party may designate in such proceeding and shall pay the fees and disbursements of such counsel related to such proceeding. In any such proceeding, an

indemnified party shall have the right to retain its own counsel at its own expense in the defense of any such action; provided, however, that counsel to the indemnified party shall not (except with the consent of the indemnifying party) also be counsel to the indemnifying party. In no event shall the indemnifying party be liable for fees and expenses of more than one separate counsel (in addition to any local counsel) for all indemnified parties in connection with any one action or separate but similar or related actions in the same jurisdiction arising out of the same general allegations or circumstances. In the case of parties indemnified pursuant to Section 6(a) and Section 6(b) above, such counsel shall be selected by Merrill Lynch, and, in the case of parties indemnified pursuant to Section 6(c) above, such counsel shall be selected by the Company. No indemnifying party shall, without the prior written consent of the indemnified parties, settle or compromise or consent to the entry of any judgment with respect to any litigation, or any investigation or proceeding by any governmental agency or body, commenced or threatened, or any claim whatsoever in respect of which indemnification or contribution could be sought under this Section 6 or Section 7 hereof (whether or not the indemnified parties are actual or potential parties thereto), unless such settlement, compromise or consent (i) includes an unconditional release of each indemnified party from all liability arising out of such litigation, investigation, proceeding or claim and (ii) does not include a statement as to or an admission of fault, culpability or a failure to act by or on behalf of any indemnified party.

(e) Other Agreements with Respect to Indemnification. The provisions of this Section shall not affect any agreement among the Company and the Selling Shareholders with respect to indemnification.

SECTION 7. Contribution. If the indemnification provided for in Section 6 hereof is for any reason unavailable to or insufficient to hold harmless an indemnified party in respect of any losses, liabilities, claims, damages or expenses referred to therein, then each indemnifying party shall contribute to the aggregate amount of such losses, liabilities, claims, damages and expenses incurred by such indemnified party, as incurred, (i) in such proportion as is appropriate to reflect the relative benefits received by the Company and the Selling Shareholders, severally, on the one hand and the Underwriters on the other hand from the offering of the Securities pursuant to this Agreement or (ii) if the allocation provided by clause (i) is not permitted by applicable law, in such proportion as is appropriate to reflect not only the relative benefits referred to in clause (i) above but also the relative fault of the Company and the Selling Shareholders on the one hand and of the Underwriters on the other hand in connection with the statements or omissions which resulted in such losses, liabilities, claims, damages or expenses, as well as any other relevant equitable considerations.

The relative benefits received by the Company and the Selling Shareholders on the one hand and the Underwriters on the other hand in connection with the offering of the Securities pursuant to this Agreement shall be deemed to be in the same respective proportions as the total net proceeds from the offering of the Securities pursuant to this Agreement (before deducting expenses) received by the Company and the Selling Shareholders and the total underwriting discount received by the Underwriters, in each case as set forth on the cover of the Prospectus bear to the aggregate initial public offering price of the Securities as set forth on the cover of the Prospectus.

The relative fault of the Company and the Selling Shareholders on the one hand and the Underwriters on the other hand shall be determined by reference to, among other things, whether any such untrue or alleged untrue statement of a material fact or omission or alleged omission to state a material fact relates to information supplied by the Company or the Selling Shareholders or by the Underwriters and the parties' relative intent, knowledge, access to information and opportunity to correct or prevent such statement or omission.

The Company, the Selling Shareholders and the Underwriters agree that it would not be just and equitable if contribution pursuant to this Section 7 were determined by pro rata allocation (even if the Underwriters were treated as one entity for such purpose) or by any other method of allocation which does not take account of the equitable considerations referred to above in this Section 7. The aggregate amount of losses, liabilities, claims, damages and expenses incurred by an indemnified party and referred to above in this Section 7 shall be deemed to include any legal or other expenses reasonably incurred by such indemnified party in investigating, preparing or defending against any litigation, or any investigation or proceeding by any governmental agency or body, commenced or threatened, or any claim whatsoever based upon any such untrue or alleged untrue statement or omission or alleged omission.

Notwithstanding the provisions of this Section 7, no Underwriter shall be required to contribute any amount in excess of the amount by which the total price at which the Securities underwritten by it and distributed to the public were offered to the public exceeds the amount of any damages which such Underwriter has otherwise been required to pay by reason of any such untrue or alleged untrue statement or omission or alleged omission.

No person guilty of fraudulent misrepresentation (within the meaning of Section 11(f) of the 1933 Act) shall be entitled to contribution from any person who was not guilty of such fraudulent misrepresentation.

For purposes of this Section 7, each person, if any, who controls an Underwriter within the meaning of Section 15 of the 1933 Act or Section 20 of the 1934 Act and each Underwriter's Affiliates and selling agents shall have the same rights to contribution as such Underwriter, and each director of the Company, each officer of the Company who signed the Registration Statement, and each person, if any, who controls the Company or any Selling Shareholder within the meaning of Section 15 of the 1933 Act or Section 20 of the 1934 Act shall have the same rights to contribution as the Company or such Selling Shareholder, as the case may be. The Underwriters' respective obligations to contribute pursuant to this Section 7 are several in proportion to the number of Initial Securities set forth opposite their respective names in Schedule A hereto and not joint.

The provisions of this Section shall not affect any agreement among the Company and the Selling Shareholders with respect to contribution.

SECTION 8. Representations, Warranties and Agreements to Survive. All representations, warranties and agreements contained in this Agreement or in certificates of officers of the Company or any of its subsidiaries or the Selling Shareholders submitted pursuant hereto, shall remain operative and in full force and effect regardless of (i) any investigation made by or on behalf of any Underwriter or its Affiliates or selling agents, any person controlling any Underwriter, its officers or directors or any person controlling the Company or any person controlling any Selling Shareholder and (ii) delivery of and payment for the Securities.

SECTION 9. Termination of Agreement.

(a) Termination; General. The Representatives may terminate this Agreement, by notice to the Company and the Selling Shareholders, at any time at or prior to Closing Time (i) if there has been, since the time of execution of this Agreement or since the respective dates as of which information is given in the Prospectus, any material adverse change in the condition, financial or otherwise, or in the earnings, business affairs or business prospects of the Company and its subsidiaries considered as one enterprise, whether or not arising in the ordinary course of business, or (ii) if there has occurred any material adverse change in the financial markets in the United States, any outbreak of hostilities or escalation thereof or other calamity or crisis or any change or development involving a prospective

change in national or international political, financial or economic conditions, in each case the effect of which is such as to make it, in the reasonable judgment of the Representatives, impracticable or inadvisable to market the Securities or to enforce contracts for the sale of the Securities, or (iii) if trading in any securities of the Company has been suspended or materially limited by the Commission or the Nasdaq National Market, or if trading generally on the American Stock Exchange or the New York Stock Exchange or in the Nasdaq National Market has been suspended or materially limited, or minimum or maximum prices for trading have been fixed, or maximum ranges for prices have been required, by any of said exchanges or by such system or by order of the Commission, the NASD or any other governmental authority, or (iv) a material disruption has occurred in commercial banking or securities settlement or clearance services in the United States, or (v) if a banking moratorium has been declared by either Federal or New York authorities.

(b) Liabilities. If this Agreement is terminated pursuant to this Section, such termination shall be without liability of any party to any other party except as provided in Section 4 hereof, and provided further that Sections 1, 6, 7 and 8 shall survive such termination and remain in full force and effect.

SECTION 10. Default by One or More of the Underwriters. If one or more of the Underwriters shall fail at Closing Time or a Date of Delivery to purchase the Securities which it or they are obligated to purchase under this Agreement (the "Defaulted Securities"), the Representatives shall have the right, within 24 hours thereafter, to make arrangements for one or more of the non-defaulting Underwriters, or any other underwriters, to purchase all, but not less than all, of the Defaulted Securities in such amounts as may be agreed upon and upon the terms herein set forth; if, however, the Representatives shall not have completed such arrangements within such 24-hour period, then:

(i) if the number of Defaulted Securities does not exceed 10% of the number of Securities to be purchased on such date, each of the non-defaulting Underwriters shall be obligated, severally and not jointly, to purchase the full amount thereof in the proportions that their respective underwriting obligations hereunder bear to the underwriting obligations of all non-defaulting Underwriters, or

(ii) if the number of Defaulted Securities exceeds 10% of the number of Securities to be purchased on such date, this Agreement or, with respect to any Date of Delivery which occurs after the Closing Time, the obligation of the Underwriters to purchase and of the Company to sell the Option Securities to be purchased and sold on such Date of Delivery shall terminate without liability on the part of any non-defaulting Underwriter.

No action taken pursuant to this Section shall relieve any defaulting Underwriter from liability in respect of its default.

In the event of any such default which does not result in a termination of this Agreement or, in the case of a Date of Delivery which is after the Closing Time, which does not result in a termination of the obligation of the Underwriters to purchase and the Company to sell the relevant Option Securities, as the case may be, either (i) the Representatives or (ii) the Company and any Selling Shareholder shall have the right to postpone Closing Time or the relevant Date of Delivery, as the case may be, for a period not exceeding seven days in order to effect any required changes in the Registration Statement or Prospectus or in any other documents or arrangements. As used herein, the term "Underwriter" includes any person substituted for an Underwriter under this Section 10.

SECTION 11. Default by One or More of the Selling Shareholders or the Company.

(a) If a Selling Shareholder shall fail at Closing Time or at a Date of Delivery to sell and deliver the number of Securities which such Selling Shareholder is obligated to sell hereunder, and the remaining Selling Shareholders do not exercise the right hereby granted to increase, pro rata or otherwise, the number of Securities to be sold by them hereunder to the total number to be sold by all Selling Shareholders as set forth in Schedule B hereto, then the Underwriters may, at the option of the Representatives, by notice from the Representatives to the Company and the non-defaulting Selling Shareholders, either (i) terminate this Agreement without any liability on the fault of any non-defaulting party except that the provisions of Sections 1, 4, 6, 7 and 8 shall remain in full force and effect or (ii) elect to purchase the Securities which the non-defaulting Selling Shareholders and the Company have agreed to sell hereunder. No action taken pursuant to this Section 11 shall relieve any Selling Shareholder so defaulting from liability, if any, in respect of such default.

In the event of a default by any Selling Shareholder as referred to in this Section 11, each of the Representatives, the Company and the non-defaulting Selling Shareholders shall have the right to postpone Closing Time or Date of Delivery for a period not exceeding seven days in order to effect any required change in the Registration Statement or Prospectus or in any other documents or arrangements.

(b) If the Company shall fail at Closing Time or at the Date of Delivery to sell the number of Securities that it is obligated to sell hereunder, then this Agreement shall terminate without any liability on the part of any nondefaulting party; provided, however, that the provisions of Sections 1, 4, 6, 7 and 8 shall remain in full force and effect. No action taken pursuant to this Section shall relieve the Company from liability, if any, in respect of such default.

SECTION 12. Tax Disclosure. Notwithstanding any other provision of this Agreement, from the commencement of discussions with respect to the transactions contemplated hereby, the Company (and each employee, representative or other agent of the Company) may disclose to any and all persons, without limitation of any kind, the tax treatment and tax structure (as such terms are used in Sections 6011, 6111 and 6112 of the U.S. Code and the Treasury Regulations promulgated thereunder) of the transactions contemplated by this Agreement and all materials of any kind (including opinions or other tax analyses) that are provided relating to such tax treatment and tax structure.

SECTION 13. Notices. All notices and other communications hereunder shall be in writing and shall be deemed to have been duly given if mailed or transmitted by any standard form of telecommunication. Notices to the Underwriters shall be directed to Merrill Lynch & Co., 3075 B Hansen Way, Palo Alto, CA 94304, attention of Chet Bozog; notices to the Company shall be directed to MKS Instruments, Inc., 6 Shattuck Road, Andover, MA 01810, attention of President; notices to Emerson shall be directed to Emerson Electric Co., 800 W. Florissant Avenue, P.O. Box 4100, St. Louis, MO 63136, attention of Harley Smith; and notices to the other Selling Shareholders shall be directed to John R. Bertucci and Claire R. Bertucci, c/o the Company at the Company's address set forth above.

SECTION 14. Parties. This Agreement shall each inure to the benefit of and be binding upon the Underwriters, the Company and the Selling Shareholders and their respective successors. Nothing expressed or mentioned in this Agreement is intended or shall be construed to give any person, firm or corporation, other than the Underwriters, the Company and the Selling Shareholders and their respective successors and the controlling persons and officers and directors referred to in Sections 6 and 7 and their heirs and legal representatives, any legal or equitable right, remedy or claim under or in respect of this Agreement or any provision herein contained. This Agreement and all conditions and provisions hereof are intended to be for the sole and exclusive benefit of the Underwriters, the Company and the Selling Shareholders and their respective successors, and said controlling persons and officers and directors and their heirs and legal representatives, and for the benefit of no other person, firm or corporation. No

purchaser of Securities from any Underwriter shall be deemed to be a successor by reason merely of such purchase.

SECTION 15. GOVERNING LAW. THIS AGREEMENT SHALL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW YORK.

SECTION 16. TIME. TIME SHALL BE OF THE ESSENCE OF THIS AGREEMENT. EXCEPT AS OTHERWISE SET FORTH HEREIN, SPECIFIED TIMES OF DAY REFER TO NEW YORK CITY TIME.

SECTION 17. Counterparts. This Agreement may be executed in any number of counterparts, each of which shall be deemed to be an original, but all such counterparts shall together constitute one and the same Agreement.

SECTION 18. Effect of Headings. The Section headings herein are for convenience only and shall not affect the construction hereof.

If the foregoing is in accordance with your understanding of our agreement, please sign and return to the Company, Emerson and the Attorney-in-Fact for the other Selling Shareholders a counterpart hereof, whereupon this instrument, along with all counterparts, will become a binding agreement among the Underwriters, the Company and the Selling Shareholders in accordance with its terms.

Very truly yours,

MKS INSTRUMENTS, INC.

By /s/ JOHN R. BERTUCCI

Name: John R. Bertucci
Title: Chairman, CEO & President

EMERSON ELECTRIC CO.

By /s/ WALTER J. GALVIN

Name: Walter J. Galvin
Title: Executive Vice President and
Chief Financial Officer

JOHN R. BERTUCCI

CLAIRE R. BERTUCCI

By /s/ RONALD C. WEIGNER

Name: Ronald C. Weigner
As Attorney-in-Fact acting on behalf of John
R. Bertucci and Claire R. Bertucci

CONFIRMED AND ACCEPTED,
as of the date first above written:

MERRILL LYNCH & CO.
MERRILL LYNCH, PIERCE, FENNER & SMITH INCORPORATED
J.P. MORGAN SECURITIES INC.
ADAMS, HARKNESS & HILL, INC.
NEEDHAM & COMPANY, INC.

BY: MERRILL LYNCH, PIERCE, FENNER & SMITH INCORPORATED

By /s/ CHET BOZOG

Authorized Signatory
Name: Chet Bozog
Title: Managing Director

For themselves and as Representatives of the other Underwriters named
in Schedule A hereto.

SCHEDULE A

Name of Underwriter	Number of Initial Securities
Merrill Lynch, Pierce, Fenner & Smith Incorporated.....	2,000,000
J.P. Morgan Securities Inc.	1,200,000
Adams, Harkness & Hill, Inc.	400,000
Needham & Company, Inc.	400,000
Total	----- 4,000,000 =====

SCHEDULE B

	Number of Initial Securities to be Sold -----	Maximum Number of Option Securities to Be Sold -----
MKS INSTRUMENTS, INC.	1,142,857	171,429
John R. Bertucci	571,428	85,714
Claire R. Bertucci	571,429	85,714
Emerson Electric Co.	1,714,286	257,143
	-----	-----
Total.....	4,000,000	600,000

Sch B-1

SCHEDULE C

MKS INSTRUMENTS, INC.
4,000,000 Shares of Common Stock
(No Par Value Per Share)

1. The public offering price per share for the Securities, determined as provided in said Section 2, shall be \$26.25.

2. The purchase price per share for the Securities to be paid by the several Underwriters shall be \$25.0687, being an amount equal to the public offering price set forth above less \$1.1813 per share; provided that the purchase price per share for any Option Securities purchased upon the exercise of the overallotment option described in Section 2(b) shall be reduced by an amount per share equal to any dividends or distributions declared by the Company and payable on the Initial Securities but not payable on the Option Securities.

Sch C-1

SCHEDULE D

List of subsidiaries

List of subsidiaries as of October 27, 2003

MKS International, Inc.
MKS Instruments France S.A.
MKS Instruments Canada Ltd.
MKS Instruments, U.K. Limited
MKS East, Inc.
MKS Japan, Inc.
MKS Korea Co., Ltd.
MKS FSC, Inc.
Telvac Engineering Limited
Spectra Sensortech, Ltd.
Applied Science and Technology, Inc.
MKS MSC, Inc.
ASTeX Realty Corporation
MKS (Bermuda) Ltd.
MKS Luxembourg S.A.R.L.
MKS Germany Holding GmbH
MKS Instruments Deutschland GmbH
ASTeX GmbH
ENI Technology, Inc.
MKS (Asia) Ltd.
MKS Hong Kong
MKS China
MKS Taiwan Ltd.
M.K.S. Tenta Products Ltd.
Tega Systems Ltd.
IPC Products GmbH
Wenzel Instruments APS
ETO Export Corporation FSC
MKS Shanghai Ltd.
ASTeX Sorbios GmbH

Sch D-1

SCHEDULE E

List of persons and entities
subject to lock-up

John R. Bertucci
Ronald C. Weigner
Leo Berlinghieri
Robert L. Klimm
Donald K. Smith
John A. Smith
William D. Stewart
Gerald L. Colella
Robert R. Anderson
James G. Berges
Richard S. Chute
Hans-Jochen Kahl
Owen W. Robbins
Louis P. Valente
Emerson Electric Co.
Claire R. Bertucci

Sch E-1

HALE AND DORR LLP
COUNSELORS AT LAW

HALEDORR.COM
60 STATE STREET - BOSTON, MA 02109
617-526-6000 - FAX 617-526-5000

January 15, 2004

MKS Instruments, Inc.
Six Shattuck Road
Andover, MA 01810-2449

Re: Registration Statement on Form S-3

Ladies and Gentlemen:

This opinion is furnished to you in connection with a Registration Statement on Form S-3 (File No. 333-109753) (the "2003 Registration Statement") filed with the Securities and Exchange Commission (the "Commission") under the Securities Act of 1933, as amended (the "Securities Act"), for the registration of an aggregate of 5,150,000 shares of Common Stock, no par value per share (the "2003 Shares"), of MKS Instruments, Inc., Massachusetts corporation (the "Company"), and a Registration Statement on Form S-3 (File No. 333-34450) (the "2000 Registration Statement") filed with the Commission under the Securities Act for the registration of an aggregate of 3,450,000 shares of Common Stock, no par value per share (the "2000 Shares", together with the 2003 Shares, the "Shares"), of which (i) up to 1,314,286 Shares (including 171,429 Shares issuable upon exercise of an over-allotment option granted by the Company) will be issued and sold by the Company and (ii) up to 3,285,714 Shares (including 428,571 Shares issuable upon exercise of an over-allotment option granted by certain stockholders of the Company (the "Selling Stockholders")) will be sold by the Selling Stockholders.

The Shares are to be sold by the Company and the Selling Stockholders pursuant to a purchase agreement (the "Purchase Agreement") to be entered into by and among the Company, the Selling Stockholders and Merrill Lynch & Co., Merrill Lynch, Pierce, Fenner & Smith Incorporated, J.P. Morgan Securities, Inc., Adams, Harkness & Hill, Inc. and Needham & Company, Inc., the form of which has been filed as Exhibit 1.1 to Company's Current Report on Form 8-K dated January 14, 2004 as filed with the Commission on the date hereof.

We are acting as counsel for the Company in connection with the sale by the Company and the Selling Stockholders of the Shares. We have examined signed copies of the 2003 Registration Statement and the 2000 Registration Statement as filed with the Commission. We have also examined and relied upon the Purchase Agreement, minutes of meetings of the stockholders and the Board of Directors of the Company as provided to us by the Company, stock record books of the Company as provided to us by the Company, the Certificate of Incorporation and By-Laws of the Company, each as restated and/or amended to date, and such

BOSTON LONDON MUNICH NEW YORK OXFORD PRINCETON RESTON WALTHAM WASHINGTON

Hale and Dorr LLP is a Massachusetts limited liability partnership. Our London and Oxford offices are operated under a Delaware limited liability partnership.

other documents as we have deemed necessary for purposes of rendering the opinions hereinafter set forth.

In our examination of the foregoing documents, we have assumed the genuineness of all signatures, the authenticity of all documents submitted to us as originals, the conformity to original documents of all documents submitted to us as copies, the authenticity of the originals of such latter documents and the legal competence of all signatories to such documents.

Our opinion in clause (ii) below, insofar as it relates to the Selling Stockholders' shares being fully paid, is based solely on a certificate of the Chief Financial Officer of the Company confirming the Company's receipt of the consideration called for by the applicable resolutions authorizing the issuance of such shares.

We assume that the appropriate action will be taken, prior to the offer and sale of the Shares in accordance with the Purchase Agreement, to register and qualify the Shares for sale under all applicable state securities or "blue sky" laws.

We express no opinion herein as to the laws of any state or jurisdiction other than the state laws of the Commonwealth of Massachusetts, and the federal laws of the United States of America.

Based upon and subject to the foregoing, we are of the opinion that (i) the Shares to be issued and sold by the Company have been duly authorized for issuance and, when such Shares are issued and paid for in accordance with the terms and conditions of the Purchase Agreement, such Shares will be validly issued, fully paid and nonassessable and (ii) the Shares to be sold by the Selling Stockholders have been duly authorized and are validly issued, fully paid and nonassessable.

It is understood that this opinion is to be used only in connection with the offer and sale of the Shares while each of the 2003 Registration Statement and the 2000 Registration Statement is in effect.

Please note that we are opining only as to the matters expressly set forth herein, and no opinion should be inferred as to any other matters. This opinion is based upon currently existing statutes, rules, regulations and judicial decisions, and we disclaim any obligation to advise you of any change in any of these sources of law or subsequent legal or factual developments which might affect any matters or opinions set forth herein.

We hereby consent to the filing of this opinion with the Commission as an exhibit to the Registration Statement in accordance with the requirements of Item 601(b)(5) of Regulation S-K under the Securities Act and to the use of our name therein and in the related Prospectus under the caption "Validity of Common Stock." In giving such consent, we do not hereby admit that

we are in the category of persons whose consent is required under Section 7 of the Securities Act or the rules and regulations of the Commission.

Very truly yours,

/s/ HALE AND DORR LLP

HALE AND DORR LLP

(MKS LOGO)

FOR IMMEDIATE RELEASE

CONTACT:
Ronald Weigner
Vice President & Chief Financial Officer
978.975.2350

MKS INSTRUMENTS ANNOUNCES PRICING OF
PUBLIC OFFERING OF COMMON STOCK

Andover, Mass., January 15, 2004, MKS Instruments, Inc. (NASDAQ: MKSI), a leading worldwide provider of process control technologies for improving productivity in semiconductor and other advanced manufacturing process environments, today announced that it has set the price for the public offering of 4,000,000 shares of its common stock at \$26.25 per share. The offering includes 1,142,857 shares offered by MKS in a new financing and 2,857,143 shares offered by certain stockholders. Net proceeds to the Company are estimated at \$28.5 million. MKS will not receive any proceeds from the sale of shares held by selling stockholders.

Merrill Lynch & Co. is the book-running manager for the offering, with J.P. Morgan Securities Inc., Adams, Harkness & Hill, Inc., and Needham & Company, Inc. acting as co-managers. The underwriters have an option to purchase up to 171,429 additional shares of common stock from the Company and up to 428,571 additional shares of common stock from the selling stockholders to cover over-allotments, if any.

MKS currently intends to use the net proceeds from any sale of MKS shares for general corporate purposes, including working capital, product development and capital expenditures, as well as potential acquisitions.

Copies of the prospectus supplement can be obtained from the Prospectus Department of Merrill Lynch, Pierce, Fenner & Smith Incorporated, 4 World Financial Center, New York, NY 10080; the Prospectus Department of J.P. Morgan Securities, Inc., 277 Park Avenue, New York, NY 10172; Adams, Harkness & Hill, Inc., 60 State Street, 6th Floor, Boston, MA 02109; Needham & Company, Inc., 445 Park Avenue, New York, NY

10022; or from the Vice President and Chief Financial Officer, MKS Instruments, Inc., Six Shattuck Road, Andover, MA 01810.

This press release 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 jurisdiction in which such offer, solicitation or sale would be unlawful prior to the registration or qualification under the securities laws of any such jurisdiction.

MKS Instruments, Inc. is a leading worldwide provider of process control solutions for advanced manufacturing processes such as semiconductor device manufacturing; thin-film manufacturing for flat panel displays, optical storage media, architectural glass and electro-optical products; and technology for medical imaging equipment. Our instruments, components and subsystems incorporate sophisticated technologies to power, measure, control, and monitor increasingly complex gas-related semiconductor manufacturing processes, thereby enhancing our customers' uptime, yield and throughput, and improving their productivity and return on invested capital.

This release contains projections or other forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995 regarding MKS' future growth and the future financial performance of MKS. These projections or statements are only predictions. Actual events or results may differ materially from those in the projections or other forward-looking statements set forth herein. Among the important factors that could cause actual events to differ materially from those in the projections or other forward-looking statements are the fluctuations in capital spending in the semiconductor industry, fluctuations in net sales to MKS' major customers, potential fluctuations in quarterly results, the failure of MKS and acquired companies to realize the anticipated benefits of their combined businesses, the challenges and risks involved with integrating the operations of MKS and acquired companies, dependence on new product development, rapid technological and market change, acquisition strategy, manufacturing and sourcing risks, volatility of stock price, international operations, financial risk management, and future growth subject to risks. Readers are referred to MKS' filings with the Securities and Exchange Commission, including its most recent Quarterly Report on Form 10-Q, for a discussion of these and other important risk factors concerning MKS and its operations. MKS is under no obligation to, and expressly

disclaims any obligation to, update or alter its forward-looking statements, whether as a result of new information, future events or otherwise.

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