AS FILED WITH THE SECURITIES AND EXCHANGE COMMISSION ON JANUARY 18, 2002

REGISTRATION NO. 333-

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UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, DC 20549

FORM S-3
REGISTRATION STATEMENT UNDER THE
SECURITIES ACT OF 1933

SPX CORPORATION
(Exact Name of Registrant as Specified in Its Charter)

DELAWARE	38-1016240
(State or Other Jurisdiction of Incorporation or Organization)	(I.R.S. Employer Identification Number)

2300 ONE WACHOVIA CENTER
301 SOUTH COLLEGE STREET
CHARLOTTE, NC 28202-6039
(704) 347-6800
(Address, Including Zip Code, and Telephone Number, Including Area Code, of Registrant's Principal Executive Offices)

CHRISTOPHER J. KEARNEY, ESQ.
VICE PRESIDENT AND GENERAL COUNSEL
SPX CORPORATION
2300 ONE WACHOVIA CENTER
301 SOUTH COLLEGE STREET
CHARLOTTE, NC 28202-6039
(704) 347-6800
(Name, Address, Including Zip Code, and Telephone Number, Including Area Code, of Agent For Service)

COPIES TO:
STUART H. GELFOND, ESQ.
FRIED, FRANK, HARRIS, SHRIVER & JACOBSON
ONE NEW YORK PLAZA
NEW YORK, NEW YORK 10004
(212) 859-8000

APPROXIMATE DATE OF COMMENCEMENT OF PROPOSED SALE TO THE PUBLIC: From time to time after this Registration Statement becomes effective.

If the only securities being registered on this form are being offered pursuant to dividend or interest reinvestment plans, please check the following box. [_]

If any of the securities being registered on this form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, other than securities offered only in connection with dividend or interest reinvestment plans, check the following box. |X|

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

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

If delivery of the prospectus is expected to be made pursuant to Rule

434, check the following box. [_]

CALCULATION OF REGISTRATION FEE

TITLE OF EACH CLASS OF SECURITIES TO BE REGISTERED	AMOUNT TO BE REGISTERED	PROPOSED MAXIMUM OFFERING PRICE PER UNIT (1)	PROPOSED MAXIMUM AGGREGATE OFFERING PRICE (1)	AMOUNT OF REGISTRATION FEE
Common stock, par value $10.00 per share, underlying warrants (2)	379,229	$131.98	$50,050,643	$4,604.66

(1) Estimated solely for the purpose of calculating the registration fee pursuant to Rule 457(c) under the Securities Act of 1933, as amended, based on the average of the high and low per share sale price on the New York Stock Exchange on January 16, 2002.

(2) The shares of our common stock being registered hereunder include the associated rights to purchase our Series A Preferred Stock. The rights to purchase our Series A Preferred Stock initially are attached to and trade with the shares of our common stock being registered hereby.

THE REGISTRANT HEREBY AMENDS THIS REGISTRATION STATEMENT ON SUCH DATE OR DATES AS MAY BE NECESSARY TO DELAY ITS EFFECTIVE DATE UNTIL THE REGISTRANT SHALL FILE A FURTHER AMENDMENT WHICH SPECIFICALLY STATES THAT THIS REGISTRATION STATEMENT SHALL THEREAFTER BECOME EFFECTIVE IN ACCORDANCE WITH SECTION 8(A) OF THE SECURITIES ACT OF 1933 OR UNTIL THE REGISTRATION STATEMENT SHALL BECOME EFFECTIVE ON SUCH DATE AS THE COMMISSION, ACTING PURSUANT TO SAID SECTION 8(A), MAY DETERMINE.

The information in this prospectus is not complete and may be changed. The shares of common stock discussed in this prospectus may not be sold or otherwise transferred until the registration statement filed with the Securities and Exchange Commission is declared effective. This prospectus is not an offer to sell these securities and it is not soliciting an offer to buy these securities in any state where the offer or sale is not permitted.

SUBJECT TO COMPLETION, DATED JANUARY 18, 2002

PROSPECTUS

SPX CORPORATION

379,229 SHARES OF

COMMON STOCK

This prospectus relates to the sale, from time to time, of up to 379,229 shares of our common stock by certain selling securityholders who hold warrants issued by GCA Corporation in 1987. In June 1988 GCA was acquired by General Signal Corporation, and in 1998 General Signal was acquired by us, and, as a result, the warrants became exercisable for shares of our common stock. The warrants represent the right to purchase an aggregate of 379,229 shares of our common stock at an exercise price of $94.5114 per share. Warrants to purchase 308,762 shares will expire on April 23, 2002, and warrants to purchase 70,467 shares will expire on September 1, 2002. For a further discussion of the warrants and the applicable terms, see "The Offering--The Selling Securityholders" and "Common Stock We May Issue Under the Warrants."

We do not know when or how the selling securityholders intend to sell the shares of our common stock or what the price, terms or conditions of any sales will be. The selling securityholders may sell the shares of our

common stock directly or through underwriters, dealers or agents, who may receive compensation. The selling securityholders may sell the shares of our common stock in privately negotiated transactions and may also sell the shares in market transactions. See "Plan of Distribution." We will not receive any proceeds from the sale of our common stock by the selling securityholders. However, we will receive the exercise price of the warrants if and when they are exercised.

Our common stock trades on the New York Stock Exchange and the Pacific Stock Exchange under the symbol "SPW." On January 17, 2002, the last reported sale price of our common stock on the NYSE was $128.50.

INVESTING IN OUR SECURITIES INVOLVES RISKS. SEE "RISK FACTORS" BEGINNING ON PAGE 5.

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

The date of this prospectus is , 2002

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WHERE YOU CAN FIND MORE INFORMATION

We file annual, quarterly and special reports, proxy statements and other information with the SEC. You may read and copy any reports, statements or other information we file with the SEC at its public reference rooms at 450 Fifth Street, N.W., Washington, D.C. 20549. Please call the SEC at 1-800-SEC-0330 for further information on the public reference rooms. Our filings are also available to the public on the Internet, through a database maintained by the SEC at http://www.sec.gov. In addition, you can inspect and copy our reports, statements and other information at the offices of the New York Stock Exchange, Inc., 20 Broad Street, New York, New York 10005 or at the offices of the Pacific Stock Exchange, 301 Pine Street, San Francisco, California 94104.

We filed a registration statement on Form S-3 to register with the SEC the sale of the common stock described in this prospectus. This prospectus is part of that registration statement. As permitted by SEC rules, this prospectus does not contain all the information contained in the registration statement or the exhibits to the registration statement. You may refer to the registration statement and accompanying exhibits for more information about us and our securities.

The SEC allows us to incorporate by reference into this document the information we filed with it. This means that we can disclose important business, financial and other information to you by referring you to other documents separately filed with the SEC. All information incorporated by reference is part of this document, unless and until that information is updated and superseded by the information contained in this document or any information subsequently incorporated by reference.

We incorporate by reference the documents listed below:

1. Our annual report on Form 10-K/A for the fiscal year ended December 31, 2000;

2. Our quarterly reports on Form 10-Q for the fiscal quarters ended March 31, 2001, June 30, 2001 and September 30, 2001;

3. Our current reports on Form 8-K filed on March 12, 2001, April 12, 2001, April 13, 2001, May 8, 2001, June 7, 2001 and September 26, 2001 and on Form 8K/A filed on August 6, 2001; and

4. Our Definitive Proxy Statement on Schedule 14A filed on March 27, 2001.

You may request a copy of these filings, at no cost, by writing or telephoning us at the following address:

Investor Relations
SPX Corporation
2300 One Wachovia Center
301 South College Street
Charlotte, North Carolina 28202-6039
Tel: (704) 347-6800, Fax: (704) 347-6900

Exhibits to the filings will not be sent, however, unless those exhibits have specifically been incorporated by reference.

We also incorporate by reference all future filings we make with the SEC under Section 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act of 1934 (i) on or after the date of the filing of the registration statement containing this prospectus and prior to the effectiveness of such registration statement and (ii) on or after the date of this prospectus until all of the shares of our common stock offered by selling securityholders have been sold. Such documents will become a part of this prospectus from the date that the documents are filed with the SEC.

Our subsidiary, Inrange Technologies Corporation, completed its initial public offering on September 27, 2000. Inrange's common stock is traded on the Nasdaq National Market under the symbol "INRG." You may obtain information about Inrange from the SEC at the address or website specified above.

You should rely only on the information contained or incorporated by reference in this prospectus and any prospectus supplement. We have not authorized any other person to provide you with different information. If anyone provides you with different or inconsistent information, you should not rely on it. We are not making an offer to sell these securities in any jurisdiction where the offer and sale is not permitted. You should assume

that the information appearing or incorporated by reference in this prospectus is accurate only as of the date of the documents containing the information. Our business, financial condition, results of operation and prospects may have changed since that date.

FORWARD-LOOKING STATEMENTS

Some of the statements in this prospectus and any documents incorporated by reference constitute "forward looking statements" within the meaning of the U.S. Private Securities Litigation Reform Act of 1995. These statements relate to future events or our future financial performance, including, but not limited to, cost savings and other benefits of acquisitions, including the acquisition of UDI, which involve known and unknown risks, uncertainties and other factors that may cause our or our businesses' actual results, levels of activity, performance or achievements to be materially different from those expressed or implied by any forward looking statements. In some cases, you can identify forward looking statements by terminology such as "may," "will," "could," "would," "should," "expect," "plan," "anticipate," "intend," "believe," "estimate," "predict," "potential" or "continue" or the negative of those terms or other comparable terminology. These statements are only predictions. Actual events or results may differ materially because of market conditions in our industries or other factors. Moreover, we do not, nor does any other person, assume responsibility for the accuracy and completeness of those statements. We have no duty to update any of the forward looking statements after the date of this prospectus to conform them to actual results. All of the forward looking statements are qualified in their entirety by reference to the factors discussed under the captions "Risk Factors" in the prospectus, "Other Matters" in "Management's Discussion and Analysis of Results of Operations and Financial Condition" in our Form 10-Q for the fiscal quarters ended March 31, 2001 and June 30, 2001 (each incorporated by reference in this prospectus) and in "Management's Discussion and Analysis of Financial Condition and Results of Operations" in our Form 10-Q for the fiscal quarter ended September 30, 2001 (incorporated by reference in this prospectus) and "Factors That May Affect Future Results" in "Management's Discussion and Analysis of Financial Condition and Results of Operations" of our most recent Form 10-K/A (incorporated by reference in this prospectus) and similar sections in our future filings which we incorporate by reference in this prospectus, which describe risks and factors that could cause results to differ materially from those projected in such forward looking statements.

We caution the reader that these risk factors may not be exhaustive. We operate in a continually changing business environment, and new risk factors emerge from time to time. Management cannot predict such new risk factors, nor can it assess the impact, if any, of such new risk factors on our businesses or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those projected in any forward looking statements. Accordingly, forward looking statements should not be relied upon as a prediction of actual results. In addition, management's estimates of future operating results are based on our current complement of businesses, which is constantly subject to change as management implements its "fix, sell or grow" strategy.

PROSPECTUS SUMMARY

You should read the following summary together with the more detailed information appearing elsewhere in this prospectus. The following summary is qualified in its entirety by the information contained elsewhere or incorporated by reference in this prospectus.

In this prospectus:

- "SPX," "the company," "we," "us," and "our" refer to SPX Corporation, a Delaware corporation, and its consolidated subsidiaries, unless the context otherwise requires;
- "UDI" refers to United Dominion Industries Limited and its subsidiaries, all of which are subsidiaries of SPX Corporation, unless the context otherwise requires;
- "February LYONs" refers to our Liquid Yield Option Notes(TM) due 2021 issued in February 2001; and
- "May LYONs" refers to our Liquid Yield Option Notes(TM) due 2021 issued in May 2001.

SPX CORPORATION

We are a global provider of technical products and systems, industrial products and services, flow technology and service solutions. We offer a diversified collection of products that includes networking and switching

products, fire detection and building life-safety products, TV and radio broadcast antennas and towers, life science products and services, transformers, compaction equipment, high-integrity castings, dock products and systems, cooling towers, air filtration products, valves, back-flow protection devices and fluid handling, metering and mixing solutions. Our products and services also include specialty service tools, diagnostic systems, service equipment and technical information services. Our products are used by a broad group of customers that serve a diverse group of industries including chemical processing, pharmaceuticals, infrastructure, mineral processing, petrochemical, telecommunications, financial services, transportation and power generation. Our common stock is publicly traded on the New York Stock Exchange and the Pacific Stock Exchange under the symbol "SPW."

We are a global multi-industry company that is focused on profitably growing our businesses that have scale and growth potential. Our strategy is to create market advantages through product and technology leadership, by expanding our service offerings to full customer solutions and by building critical mass through strategic acquisitions. We continually review each of our businesses pursuant to our "fix, sell or grow" strategy. These reviews could result in selected acquisitions to expand an existing business or result in the disposition of an existing business. At any given time, we may engage in discussions with respect to potential acquisitions in related or unrelated industries, asset sales and joint ventures, some of which may be material.

On May 24, 2001, we completed the acquisition of United Dominion Industries Limited, or UDI, in an all-stock transaction valued at $1,066.9 million. A total of 9.385 million shares were issued (3.890 million from treasury) to complete the transaction. We also assumed or refinanced $884.1 million of UDI debt bringing the total transaction value to $1,951.0 million. UDI manufactures proprietary engineered and flow technology products primarily for industrial and commercial markets worldwide. UDI, which had sales of $2,366.2 million in 2000, is included in our financial statements beginning May 25, 2001 and is represented in the description of our company.

We are a Delaware corporation. Our principal executive offices are located at 2300 One Wachovia Center, 301 South College Street, Charlotte, North Carolina 28202-6039, and our telephone number is (704) 347-6800.

THE OFFERING

Common stock outstanding as of December 26, 2001	40,420,975 shares.*
Common stock being registered for selling securityholders	379,229 shares.
Use of Proceeds	We will not receive any of the proceeds from the sales of common stock by the selling securityholders. However, if one or more of the selling securityholders exercises its rights under the warrants, we could receive up to $35,841,463 in gross proceeds representing the exercise price for the shares of common stock underlying the warrants. All of the proceeds that we receive, if any, will be used for general corporate purposes.
NYSE and PSE symbol	SPW.

* The common stock outstanding as of December 26, 2001 excludes the following: (A) approximately 6.6 million shares issuable upon conversion of our February LYONs and our May LYONs; (B) approximately 8.7 million shares issuable upon exercise of outstanding stock options by employees and non-employee directors; and (C) approximately 5.7 million shares of our common stock reserved for future issuance of additional options and shares under our employee stock option plan and non-employee director stock option plan. Each of the amounts is subject to adjustment as specified in the appropriate documents.

THE SELLING SECURITYHOLDERS

We have prepared this prospectus in connection with the registration of the resale of shares of our common stock underlying warrants issued in 1987 by GCA Corporation, a company acquired by General Signal Corporation in 1988. The warrants were issued to GCA's bank and insurance company lenders and to one vendor and represented the right to purchase GCA common stock. As a result of the acquisition of GCA by General Signal and the subsequent acquisition of General Signal by us, the warrants now represent the right to purchase shares of our common stock at an exercise price of $94.5114 per share. The warrants issued to GCA's bank and insurance company lenders presently represent the right to purchase 308,762 shares of our common stock and are exercisable through April 23, 2002. The warrants issued to the vendor presently represent the right to purchase 70,467 shares of our common stock and are exercisable through September 1, 2002. We are registering these shares in satisfaction of GCA's obligation to register these shares under registration agreements entered into between these selling securityholders and GCA in connection with the issuance of the warrants described above.

RISK FACTORS

In evaluating an investment in our common stock, you should carefully consider all the information included or incorporated by reference in this prospectus. In particular, you should evaluate the specific risk factors set forth under "Risk Factors," beginning on page 5 of the prospectus as updated by information under the caption "Legal Proceedings" in our Form 10-Q for the fiscal quarter ended September 30, 2001.

RISK FACTORS

You should carefully consider the risks described below before making a decision to invest in our common stock. Some of the following factors relate principally to our business and the industry in which we operate. Other factors relate principally to your investment in our common stock. The risks and uncertainties described below are not the only ones facing our company. Additional risks and uncertainties not presently known to us or that we currently deem immaterial may also adversely affect our business and operations.

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

OUR LEVERAGE MAY AFFECT OUR BUSINESS AND MAY RESTRICT OUR OPERATING FLEXIBILITY.

At September 30, 2001, we had approximately $2,709.1 million in total indebtedness. At such date, we had $530.1 million of available borrowing capacity under our revolving senior credit facility after giving effect to $69.9 million reserved for letters of credit outstanding which reduce the availability under our revolving senior credit facility. In addition, at September 30, 2001, our cash balance was $340.5 million. For a description of our indebtedness, please see "Management's Discussion and Analysis of Results of Operations and Financial Condition" in our quarterly reports on Form 10-Q for the fiscal quarters ended March 31, 2001 and June 30, 2001 and in "Management's Discussion and Analysis of Financial Condition and Results of Operations" in our Form 10-Q for the fiscal quarter ended September 30, 2001 and "Management's Discussion and Analysis of Financial Condition and Results of Operations" in our annual report on Form 10-K/A for the fiscal year ended December 31, 2000 and any future Forms 10-Q and 10-K which we file, which are incorporated by reference in this prospectus. Subject to certain restrictions set forth in the senior credit facility, we may incur additional indebtedness in the future, including indebtedness incurred to finance, or which is assumed in connection with, acquisitions. We may in the future renegotiate or refinance our senior credit facility with agreements that have different or more stringent terms or split our senior credit facility into two or more facilities with different terms. The level of our indebtedness could:

- limit cash flow available for general corporate purposes, such as acquisitions and capital expenditures, due to the ongoing cash flow requirements for debt service;
- limit our ability to obtain, or obtain on favorable terms, additional debt financing in the future for working capital, capital expenditures or acquisitions;
- limit our flexibility in reacting to competitive and other changes in the industry and economic conditions generally;
- expose us to a risk that a substantial decrease in net operating cash flows due to economic developments or adverse developments in our business could make it difficult to meet debt service requirements; and
- expose us to risks inherent in interest rate fluctuations because the existing borrowings are and any new borrowings may be at variable rates of interest, which could result in higher interest expense in the event of increases in interest rates.

Our ability to make scheduled payments of principal of, to pay interest on, or to refinance our indebtedness and to satisfy our other debt obligations will depend upon our future operating performance, which may be affected by general economic, financial, competitive, legislative, regulatory, business and other factors beyond our control. We will not be able to control many of these factors, such as the economic conditions in the markets in which we operate and initiatives taken by our competitors. In addition, there can be no assurance that future borrowings or equity financing will be available for the payment or refinancing of our indebtedness. If we are unable to service our indebtedness, whether in the ordinary course of business or upon acceleration of such indebtedness, we may be forced to pursue one or more alternative strategies, such as restructuring or refinancing our indebtedness, selling assets, reducing or delaying capital expenditures or seeking additional equity capital. There

can be no assurance that any of these strategies could be effected on satisfactory terms, if at all.

WE MAY NOT BE ABLE TO FINANCE FUTURE NEEDS OR ADAPT OUR BUSINESS PLAN TO CHANGES IN ECONOMIC OR BUSINESS CONDITIONS BECAUSE OF RESTRICTIONS PLACED ON US BY OUR SENIOR CREDIT FACILITY AND THE INSTRUMENTS GOVERNING OUR OTHER INDEBTEDNESS.

Our senior credit facility and other agreements governing our other indebtedness contain or may contain covenants that restrict our ability to make distributions or other payments to our investors and creditors unless certain financial tests or other criteria are satisfied. We must also comply with certain specified financial ratios and tests. In some cases, our subsidiaries are subject to similar restrictions which may restrict their ability to make distributions to us. In addition, our senior credit facility and these other agreements contain or may contain additional affirmative and negative covenants. All of these restrictions could affect our ability to operate our business and may limit our ability to take advantage of potential business opportunities such as acquisitions as they arise.

If we do not comply with these or other covenants and restrictions contained in our senior credit facility and other agreements governing our indebtedness, we could be in default under those agreements, and the debt, together with accrued interest, could then be declared immediately due and payable. If we default under our senior credit facility, the lenders could cause all of our outstanding debt obligations under our senior credit facility to become due and payable, require us to apply all of our cash to repay the indebtedness or prevent us from making debt service payments on any other indebtedness we owe. In addition, any default under our senior credit facility or agreements governing our other indebtedness could lead to an acceleration of debt under other debt instruments that contain cross-acceleration or cross-default provisions. If the indebtedness under our senior credit facility is accelerated, we may not have sufficient assets to repay amounts due under our senior credit facility, the February LYONs, the May LYONs or under other debt securities then outstanding. Our ability to comply with these provisions of our senior credit facility and other agreements governing our other indebtedness may be affected by changes in the economic or business conditions or other events beyond our control.

OUR FAILURE TO SUCCESSFULLY INTEGRATE UDI AND OTHER RECENT ACQUISITIONS, AS WELL AS ANY FUTURE ACQUISITIONS, COULD HAVE A NEGATIVE EFFECT ON OUR OPERATIONS; OUR ACQUISITIONS COULD CAUSE UNEXPECTED FINANCIAL DIFFICULTIES.

As part of our business strategy, we evaluate potential acquisitions in the ordinary course. In 2000, we made 21 acquisitions of businesses for an aggregate price of approximately $226.8 million. Excluding the UDI acquisition, in the first nine months of 2001, we made thirteen acquisitions of businesses for an aggregate purchase price of approximately $453.6 million. Our past acquisitions, particularly the acquisition of UDI which had sales of approximately $2,366.2 million for the year ended December 31, 2000, and any potential future acquisitions, involve a number of risks and present financial, managerial and operational challenges, including:

- adverse effects on our reported operating results due to charges to earnings and the amortization of goodwill associated with acquisitions;
- diversion of management attention from running our existing businesses;
- difficulty with integration of personnel and financial and other systems;
- increased expenses, including compensation expenses resulting from newly-hired employees;
- increased foreign operations which may be difficult to assimilate;
- assumption of known and unknown liabilities and increased litigation; and
- potential disputes with the sellers of acquired businesses, technologies, services or products.

We may not be able to integrate successfully the technology, operations and personnel of any acquired business. Customer dissatisfaction or performance problems with an acquired business, technology, service or product could also have a material adverse effect on our reputation and

business. In addition, any acquired business, technology, service or product could underperform relative to our expectations. We could also experience financial or other setbacks if any of the businesses that we have acquired or may acquire in the future have problems or liabilities of which we are not aware or which are substantially greater than we anticipate. In addition, as a result of future acquisitions, we may further increase our leverage or, if we issue equity securities to pay for the acquisitions, significantly dilute our existing securityholders.

WE MAY NOT ACHIEVE THE EXPECTED COST SAVINGS AND OTHER BENEFITS OF OUR ACQUISITIONS, INCLUDING UDI.

As a result of our acquisitions, including the acquisition of UDI, we incur integration expenses for the incremental costs to exit and consolidate activities, to involuntarily terminate employees, and for other costs to integrate operating locations and other activities of these companies with SPX. Generally accepted accounting principles require that these acquisition integration expenses, which are not associated with the generation of future revenues and have no future economic benefit, be reflected as assumed liabilities in the allocation of the purchase price to the net assets acquired. On the other hand, these same principles require that acquisition integration expenses associated with integrating SPX operations into locations of the acquired company's must be recorded as expense. Accordingly, these expenses are not included in the allocation of purchase price of the company acquired. Over the past five years, we have recorded several special charges to our results of operations associated with cost reductions, integrating acquisitions and achieving operating efficiencies. We believe that our actions have been required to improve our operations and, as described above, we will, if necessary, record future charges as appropriate to address costs and operational efficiencies at the combined company.

We believe our anticipated savings from the cost reduction and integration actions associated with the UDI acquisition should exceed $120.0 million on an annualized basis. Our current integration plan focuses on three key areas of cost savings: (1) manufacturing process and supply chain rationalization, including plant closings, (2) elimination of redundant administrative overhead and support activities, and (3) restructuring and repositioning sales and marketing organizations to eliminate redundancies in these activities. While we believe these cost savings to be reasonable and significant cost reductions have been achieved to date, they are inherently estimates which are difficult to predict and are necessarily speculative in nature. In addition, we cannot assure you that unforeseen factors will not offset the estimated cost savings or other benefits from the acquisition. As a result, our actual cost savings, if any, and other anticipated benefits could differ or be delayed, compared to our estimates and from the other information contained in this prospectus.

WE MAY NOT BE ABLE TO CONSUMMATE ACQUISITIONS AT OUR PRIOR RATE WHICH COULD NEGATIVELY IMPACT US.

We may not be able to consummate acquisitions at similar rates to our past acquisition rates, which could materially impact our growth rate, results of operations and stock price. Our ability to continue to achieve our goals may depend upon our ability to identify and successfully acquire companies, businesses and product lines, to effectively integrate these businesses and achieve cost effectiveness. We may also need to raise additional funds to consummate these acquisitions. In addition, changes in our stock price may adversely affect our ability to consummate acquisitions.

THE LOSS OF KEY PERSONNEL AND ANY INABILITY TO ATTRACT AND RETAIN QUALIFIED EMPLOYEES COULD MATERIALLY ADVERSELY IMPACT OUR OPERATIONS.

We are dependent on the continued services of our management team, including our Chairman of the Board, President and Chief Executive Officer. The loss of such personnel without adequate replacement could have a material adverse effect on us. Additionally, we need qualified managers and skilled employees with technical and manufacturing industry experience in order to operate our business successfully. From time to time there may be a shortage of skilled labor which may make it more difficult and expensive for us to attract and retain qualified employees. If we are unable to attract and retain qualified individuals or our costs to do so increase significantly, our operations would be materially adversely affected.

MANY OF THE INDUSTRIES IN WHICH WE OPERATE ARE CYCLICAL AND, ACCORDINGLY, OUR BUSINESS IS SUBJECT TO CHANGES IN THE ECONOMY; PRESSURE FROM ORIGINAL EQUIPMENT MANUFACTURERS TO REDUCE COSTS COULD ADVERSELY AFFECT OUR BUSINESS; OUR BUSINESS WAS IMPACTED BY THE TERRORIST ATTACKS ON SEPTEMBER 11, 2001.

Many of the business areas in which we operate are subject to specific

industry and general economic cycles. Certain businesses are subject to industry cycles, including, but not limited to, the automotive industries which influence our Service Solutions and Industrial Products and Services segments, the electric power and construction and infrastructure markets which influence our Industrial Products and Services segment, the telecommunications networks and building construction industries which influence our Technical Products and Systems segment, and process equipment, chemical and petrochemical markets which influence our Flow Technology segment. Accordingly, any downturn in these or other markets in which we participate could materially adversely affect us. A decline in automotive sales and production may also affect not only sales of components, tools and services to vehicle manufacturers and their dealerships, but also sales of components, tools and services to aftermarket customers, and could result in a decline in our results of operations or a deterioration in our financial condition. Similar cyclical changes could also affect aftermarket sales of products in our other segments. If demand changes and we fail to respond accordingly, our results of operations could be materially adversely affected in any given quarter. The business cycles of our different operations may occur contemporaneously.

Consistent with most multi-industry, capital goods companies, our businesses have been impacted in 2001 by the soft economic conditions. There can be no assurance that the economic downturn will not worsen or that we will be able to sustain existing or create additional cost reductions to offset economic conditions, and the unpredictability and changes in the industrial markets in the current environment could continue and may adversely impact our results.

There is also substantial and continuing pressure from the major original equipment manufacturers, particularly in the automotive industry, to reduce costs, including the cost of products and services purchased from outside suppliers such as us. If in the future we were unable to generate sufficient cost savings to offset price reductions, our gross margins could be materially adversely affected.

IF FUTURE CASH FLOWS ARE INSUFFICIENT TO RECOVER THE CARRYING VALUE OF OUR GOODWILL, A MATERIAL NON-CASH CHARGE TO EARNINGS COULD RESULT.

At September 30, 2001, we had goodwill and intangible assets of approximately $2,994.8 million and shareholders' equity of approximately $1,617.9 million. On an ongoing basis, we evaluate, based on projected undiscounted cash flows, whether we will be able to recover all or a portion of the carrying value of goodwill. Based on this method, we expect to recover the carrying value of goodwill through our future cash flows. If future cash flows are insufficient to recover the carrying value of our goodwill, we must write off a portion of the unamortized balance of goodwill. There can be no assurance that circumstances will not change in the future that will affect the useful life or carrying value of our goodwill and accordingly require us to take a charge to write off a portion of our goodwill.

In July 2001 the Financial Accounting Standards Board issued Statement of Financial Accounting Standards No. 141 "Business Combinations" ("SFAS 141") and Statement of Financial Accounting Standards No. 142 "Goodwill and Other Intangible Assets" ("SFAS 142"). We will adopt SFAS 141 and SFAS 142 for our fiscal year beginning on January 1, 2002. We are currently evaluating the impact that adoption of SFAS 141 and SFAS 142 will have on our financial position and results of operations.

WE ARE SUBJECT TO ENVIRONMENTAL AND SIMILAR LAWS AND POTENTIAL LIABILITY RELATING TO CERTAIN CLAIMS, COMPLAINTS AND PROCEEDINGS, INCLUDING THOSE RELATING TO ENVIRONMENTAL AND OTHER MATTERS, ARISING IN THE ORDINARY COURSE OF BUSINESS.

We are subject to various environmental laws, ordinances, regulations, and other requirements of government authorities in the United States and other nations. Such requirements may include, for example, those governing discharges from, and materials handled as part of, our operations, the remediation of soil and groundwater contaminated by petroleum products or hazardous substances or wastes, and the health and safety of our employees. Under certain of these laws, ordinances or regulations, a current or previous owner or operator of property may be liable for the costs of investigation, removal or remediation of certain hazardous substances or petroleum products on, under, or in its property, without regard to whether the owner or operator knew of, or caused, the presence of the contaminants, and regardless of whether the practices that resulted in the contamination were legal at the time they occurred. The presence of, or failure to remediate properly, such substances may have adverse effects, including, for example, substantial investigative or remedial obligations, and limits on the ability to sell or rent such property or to borrow funds using such property as collateral. In connection with our acquisitions and

divestitures, we may assume or retain significant environmental liabilities some of which we may not be aware. In particular, we assumed additional environmental liabilities in connection with the UDI acquisition. Future developments related to new or existing environmental matters or changes in environmental laws or policies could lead to material costs for environmental compliance or cleanup. There can be no assurance that such liabilities and costs will not have a material adverse effect on our results of operations or financial position in the future.

Numerous claims, complaints and proceedings arising in the ordinary course of business, including but not limited to those relating to environmental matters, competitive issues, contract issues, intellectual property matters, personal injury and product liability claims, and workers' compensation have been filed or are pending against us and certain of our subsidiaries. We have insurance and indemnification for a portion of such items. In our opinion, these matters are individually or in the aggregate either without merit or are of a kind as should not have a material adverse effect on our financial position, results of operations, or cash flows if disposed unfavorably. However, there can be no assurance that recoveries for insurance and indemnification will be available or that any such claims or other matters could not have a material adverse effect on our financial position, results of operations or cash flows. Additionally, in connection with our acquisitions, we may become subject to significant claims of which we were unaware at the time of the acquisition or the claims that we were aware of may result in our incurring a significantly greater liability than we anticipated.

On or about October 29, 2001, we were served with a complaint by VSI Holdings, Inc. seeking enforcement of a merger agreement that we had terminated. In its complaint, VSI asked the court to require us to complete the $197.0 million acquisition of VSI, and/or award damages to VSI and its shareholders. We do not believe the suit has merit and are defending the claim vigorously. On December 26, 2001, we filed our answer denying VSI's allegations, raising affirmative defenses, and asserting a counterclaim against VSI for breach of contract. There can be no assurance that we will be successful in the litigation. If we are not successful, the outcome could have a material adverse effect on our financial condition and results of operations.

OUR INRANGE SUBSIDIARY IS SUBJECT TO VARIOUS RISKS AND ANY MATERIAL ADVERSE EFFECT ON INRANGE COULD MATERIALLY ADVERSELY AFFECT OUR FINANCIAL RESULTS.

We own approximately 89.5% of the total number of outstanding shares of common stock of Inrange Technologies Corporation. Based on the closing price of Inrange's Class B common stock on January 15, 2002, Inrange's market capitalization was approximately $1,095.8 million on such date. Inrange is a high technology company and is subject to additional and different risks, and its public equity trades similar to other technology businesses.

The terrorist events of September 11, 2001 have had a material effect on Inrange's business. Inrange's near-term business may be impacted by the following factors:

- customer buying decisions being delayed;
- travel restrictions, which impacts sales efforts; and
- Inrange's largest world-wide sales office adjacent to the World Trade Center was closed indefinitely which has required us to relocate our sales force to a newly acquired operation in New Jersey.

The impact to Inrange's business subsequent to the events on September 11, 2001 reduced its third quarter 2001 results and as a consequence, will negatively affect the full 2001 year results. Inrange's business could be adversely impacted by the continued economic softening. Any adverse effect on Inrange could affect us.

In addition to the risks described herein for our business as a whole, Inrange is subject to the following risks:

- Inrange's business will suffer if it fails to develop, successfully introduce and sell new and enhanced high quality, technologically advanced cost-effective products that meet the changing needs of its customers on a timely basis. Inrange's competitors may develop new and more advanced products on a regular basis;
- Inrange relies on a sole manufacturer to produce one of its key products and on sole sources of supply for some key components in its products. Any disruption in these

relationships could increase product costs and reduce Inrange's ability to provide its products or develop new products on a timely basis; and

- The price for Inrange's products may decrease in response to competitive pricing pressures, maturing life cycles, new product introductions and other factors. Accordingly, Inrange's profitability may decline unless it can reduce its production and sales costs or develop new higher margin products.

The foregoing is a summary of the risk factors applicable to Inrange. For a more complete description of those risks, please see "Risk Factors" in Inrange's annual report of Form 10-K for the fiscal year ended December 31, 2000, which section is hereby incorporated by reference in this prospectus. See "Where You Can Find More Information."

DIFFICULTIES PRESENTED BY INTERNATIONAL ECONOMIC, POLITICAL, LEGAL, ACCOUNTING AND BUSINESS FACTORS COULD NEGATIVELY AFFECT OUR INTERESTS AND BUSINESS EFFORT.

In 2000, on a pro forma basis for our acquisition of UDI, approximately 27% of our sales were international, including export sales. In addition, in 2000, approximately 40% of Inrange's sales were international, including export sales. We are seeking to increase our sales outside the United States. Our international operations require us to comply with the legal requirements of foreign jurisdictions and expose us to the political consequences of operating in foreign jurisdictions. Our foreign business operations are also subject to the following risks:

- difficulty in managing, operating and marketing our international operations because of distance, as well as language and cultural differences;

- increased strength of the U.S. dollar will increase the effective price of our products sold in U.S. dollars which may have a material adverse effect on sales or require us to lower our prices and also decrease our reported revenues or margins in respect of sales conducted in foreign currencies to the extent we are unable or determine not to increase local currency prices; likewise, decreased strength of the U.S. dollar could have a material adverse effect on the cost of materials and products purchased overseas;

- difficulty entering new international markets due to greater regulatory barriers than the United States and differing political systems;

- increased costs due to domestic and foreign customs and tariffs, potentially adverse tax consequences, including imposition or increase of withholding and other taxes on remittances and other payments by subsidiaries, and transportation and shipping expenses;

- credit risk or financial condition of local customers and distributors;

- potential difficulties in staffing and labor disputes;

- risk of nationalization of private enterprises;

- increased costs of transportation or shipping;

- ability to obtain supplies from foreign vendors and ship products internationally during times of crisis or otherwise;

- potential difficulties in protecting intellectual property;

- potential imposition of restrictions on investments; and

- local political and social conditions, including the possibility of hyperinflationary conditions and political instability in certain countries.

As we continue to expand our international operations, including as a result of the UDI acquisition, these and other risks associated with international operations are likely to increase. In addition, as we enter new geographic markets, we may encounter significant competition from the primary participants in such markets, some of which may have substantially greater resources than we do.

FUTURE INCREASES IN THE NUMBER OF SHARES OF OUR OUTSTANDING COMMON STOCK COULD ADVERSELY AFFECT OUR COMMON STOCK PRICE OR DILUTE OUR EARNINGS PER SHARE.

Sales of a substantial number of shares of common stock into the public market, or the perception that these sales could occur, could have a material adverse effect on our stock price. If certain conditions are met, the February LYONs and May LYONs could be converted into shares of our common stock. The shares covered by the February LYONs and the May LYONs have been registered under the Securities Act. Subject to adjustment, the February LYONs and May LYONs could be converted into an aggregate of approximately 6.6 million shares of our common stock. In addition, as of December 26, 2001, approximately 8.7 million shares of our common stock are issuable upon exercise of outstanding stock options by employees and non-employee directors. As of December 26, 2001, under our employee stock option plan and non-employee director stock option plan, approximately 5.7 million shares of our common stock are reserved for future issuance of additional options and shares under these plans. Additionally, we may issue a significant number of additional shares in connection with our acquisitions. We have also filed a shelf registration statement for 4.3 million shares of common stock which may be issued in acquisitions and we have also filed a shelf registration statement for a total of $1,000 million which may be used in connection with an offering of debt securities and/or common stock for general corporate purposes. Any such additional shares could also have a dilutive effect on our earnings per share.

PROVISIONS IN OUR CORPORATE DOCUMENTS AND DELAWARE LAW MAY DELAY OR PREVENT A CHANGE IN CONTROL OF OUR COMPANY, AND ACCORDINGLY, WE MAY NOT CONSUMMATE A TRANSACTION THAT OUR STOCKHOLDERS CONSIDER FAVORABLE.

Provisions of our Certificate of Incorporation and By-laws may inhibit changes in our control not approved by our Board. We also have a rights plan designed to make it more costly and thus more difficult to gain control of us without the consent of our Board. We are also afforded the protections of Section 203 of the Delaware General Corporation Law, which could have similar effects. See "Description of Common Stock."

USE OF PROCEEDS

We will not receive any of the proceeds from the sales of common stock by the selling securityholders. However, if one or more of the selling securityholders exercises its rights under the warrants, we could receive up to $35.8 million in gross proceeds representing the exercise price for the shares of common stock underlying the warrants. All of the proceeds that we receive, if any, will be used for general corporate purposes.

BUSINESS

We are a global provider of technical products and systems, industrial products and services, flow technology and service solutions. We offer a diversified collection of products that includes networking and switching products, fire detection and building life-safety products, TV and radio broadcast antennas and towers, life science products and services, transformers, compaction equipment, high-integrity castings, dock products and systems, cooling towers, air filtration products, valves, back-flow protection devices and fluid handling, metering and mixing solutions. Our products and services also include specialty service tools, diagnostic systems, service equipment and technical information services. Our products are used by a broad group of customers that serve a diverse group of industries including chemical processing, pharmaceuticals, infrastructure, mineral processing, petrochemical, telecommunications, financial services, transportation and power generation. Our common stock is publicly traded on the New York Stock Exchange and the Pacific Stock Exchange under the symbol "SPW."

We are a global multi-industry company that is focused on profitably growing our businesses that have scale and growth potential. Our strategy is to create market advantages through product and technology leadership, by expanding our service offerings to full customer solutions and by building critical mass through strategic acquisitions. We continually review each of our businesses pursuant to our "fix, sell or grow" strategy. These reviews could result in selected acquisitions to expand an existing business or result in the disposition of an existing business. At any given time, we may be in discussions with one or more parties which discussions may be material.

On May 24, 2001, we completed the acquisition of UDI in an all-stock transaction valued at $1,066.9 million. A total of 9.385 million shares were issued (3.890 million from treasury) to complete the transaction. We also assumed or refinanced $884.1 million of UDI debt bringing the total transaction value to $1,951.0 million. UDI manufactures proprietary engineered and flow technology products primarily for industrial and commercial markets worldwide. UDI, which had sales of $2,366.2 million in 2000, is included in our financial statements beginning May 25, 2001 and is represented in the description of our company.

In the second quarter of 2001, following the UDI acquisition, we began operating and reporting our results of operations in four segments, Technical Products and Systems, Industrial Products and Services, Flow Technology and Service Solutions. The new structure aligns our financial reporting with the current structure of our organization.

TECHNICAL PRODUCTS AND SYSTEMS

The Technical Products and Systems segment is focused on solving customer problems with complete technology-based systems. This segment includes operating units that design and manufacture networking and switching products for storage, data and telecommunications networks, fire detection and integrated building life-safety systems, TV and radio transmission systems, automated fare collection systems, laboratory and industrial ovens and freezers, electrical test and measurement solutions, cable and pipe locating devices, laboratory testing chambers, sample preparation and processing equipment, and electrodynamic shakers.

INDUSTRIAL PRODUCTS AND SERVICES

The Industrial Products and Services segment emphasizes introducing new related services and products, as well as focusing on the replacement parts and service elements of the segment. This segment includes operating units that design, manufacture, and market power transformers, hydraulic systems, high-integrity aluminum and magnesium die-castings, forgings, automatic transmission filters, industrial filtration products, dock equipment, material handling devices, electric resistance heaters, soil, asphalt and landfill compactors, specialty farm machinery, as well as components for the aerospace industry.

FLOW TECHNOLOGY

The Flow Technology segment designs, manufactures, and markets solutions and products that are used to process or transport fluids and in heat transfer applications. This segment includes operating units that manufacture pumps and other fluid handling machines, valves, cooling towers, boilers, leak detection equipment, and industrial mixers.

SERVICE SOLUTIONS

The Service Solutions segment includes operations that design, manufacture, and market a wide range of specialty tools, hand-held diagnostic systems and service equipment, inspection gauging systems, precision scales, and technical and training information.

COMMON STOCK WE MAY ISSUE UNDER THE WARRANTS

The selling securityholders are selling under this prospectus an aggregate of up to 379,229 shares of our common stock issuable upon exercise of the warrants. Of the warrants, 308,762 warrants are exercisable through April 23, 2002, and 70,467 warrants are exercisable through September 1, 2002, all at an exercise price of $94.5114 per share.

The exercise price and number of shares of our common stock which may be purchased upon exercise of any of the warrants are subject to certain "anti-dilution" adjustments in the event of any:

- dividend or distribution on shares of common stock payable in our common stock;
- subdivision, reclassification, combination or consolidation of our common stock; or
- consolidation or merger, conveyance or transfer of all or substantially all of our property.

DESCRIPTION OF COMMON STOCK

GENERAL

Our authorized capital stock consists of 100 million shares of common stock, par value $10.00 per share, and 3 million shares of preferred stock, without par value. As of December 26, 2001, 40.4 million shares of common stock were issued and outstanding (not including treasury shares) and 0.5 million shares have been designated as Series A Preferred Stock, of which none are issued and outstanding. The following description of our common stock and provisions of our Certificate of Incorporation and By-laws are only summaries and we encourage you to review complete copies of our Certificate of Incorporation and By-laws, which we have previously filed with the SEC.

The holders of our common stock are entitled to have dividends declared in cash, property, or other securities out of any of our net profits or net assets legally available therefor as and when declared by our Board of Directors. In the event of the liquidation or dissolution of our business, the holders of common stock will be entitled to receive ratably the balance of net assets available for distribution after payment of any liquidation or distribution preference payable with respect to any then outstanding shares of our preferred stock. Each share of common stock is entitled to one vote with respect to matters brought before the stockholders, except for the election of any directors who may be elected by vote of any outstanding shares of preferred stock voting as a class.

The rights and privileges of our common stock may be subordinate to the rights and preferences of any of our preferred stock. The Board is authorized to fix by resolution the designation of each series of preferred stock, and, with respect to each series, the stated value of the shares, the dividend rate and the dates and other provisions respecting the payment of dividends, the provisions, if any, for a sinking fund, the preferences of the shares in the event of the liquidation or dissolution, the provisions, if any, respecting the redemption of the shares, subject to applicable law, the voting rights (except that such shares shall not have more than one vote per share), the terms, if any, upon which the shares would be convertible into or exchangeable for any other shares, and any other relative, participating, optional or other special rights, qualifications, limitations or restrictions. All shares of any series of preferred stock, as between themselves, rank equally and are identical; and all series of preferred stock, as between themselves, rank equally and are identical except as set forth in resolutions of the Board authorizing the issuance of a particular series.

Our common stock is traded on the New York Stock Exchange and the Pacific Stock Exchange under the symbol "SPW."

DELAWARE ANTI-TAKEOVER LAW AND CERTAIN CERTIFICATE OF INCORPORATION AND BYLAW PROVISIONS

The provisions of Delaware law, our Certificate of Incorporation and By-Laws may have the effect of delaying, deferring or discouraging another person from acquiring control of our company, including takeover attempts that might result in a premium over the market price for the shares of common stock.

Delaware Law

We are subject to the provisions of Section 203 of the Delaware General Corporation Law regulating corporate takeovers. In general, Section 203 prohibits a publicly-held Delaware corporation from engaging in a "business combination" with an "interested stockholder" for a period of three years after the time that the person became an interested stockholder, unless:

- before the person became an "interested stockholder," the board of directors of the corporation approved the transaction in which the "interested stockholder" became an "interested stockholder" or approved the business combination;
- upon consummation of the transaction that resulted in the stockholder becoming an "interested stockholder," the "interested stockholder" owned at least 85% of the voting stock of the corporation that was outstanding at the time the transaction commenced. For purposes of determining the number of shares outstanding, shares owned by directors who are also officers of the corporation and shares owned by employee stock plans, in specified instances, are excluded; or
- at or after the time the person became an "interested stockholder," the business combination is approved by the board of directors of the corporation and authorized at an annual or special meeting of the stockholders by the affirmative vote of at least 66 2/3% of the outstanding voting stock which is not owned by the "interested stockholder."

A "business combination" is defined generally to include mergers or consolidations between a Delaware corporation and an "interested stockholder," transactions with an "interested stockholder" involving the assets or stock of the corporation or any majority-owned subsidiary, transactions which increase an "interested stockholder's" percentage ownership of stock of the corporation or any majority-owned subsidiary, and receipt of various financial benefits from the corporation or any majority-owned subsidiary. In general, an "interested stockholder" is defined as any person or entity that is the beneficial owner of at least 15% of a corporation's outstanding voting stock or is an affiliate or associate of the corporation and was the beneficial owner of 15% or more of the outstanding voting stock of the corporation at any time within the past three years.

A Delaware corporation may opt out of this provision with an express provision in its original certificate of incorporation or an express provision in its certificate of incorporation or by-laws resulting from a stockholders' amendment approved by at least a majority of the outstanding voting shares. However, we have not opted out of this provision. The statute could prohibit or delay mergers or other takeover or change-in-control attempts and, accordingly, may discourage attempts to acquire us.

Certificate of Incorporation and By-Law Provisions

Our Certificate of Incorporation and By-Laws provide:

- a staggered Board of Directors so that it would take three successive annual meetings to replace all directors;
- a prohibition on stockholder action through written consents;
- a requirement that special meetings of stockholders be called only by our Chairman, President and Chief Executive Officer or our Board;
- advance notice requirements for stockholder proposals and nominations;
- limitations on the ability of stockholders to amend, alter or repeal the By-laws;
- enhanced voting requirements for certain business combinations involving substantial stockholders;
- the authority of our Board of Directors to issue, without stockholder approval, preferred stock with such terms as our

Board may determine; and

- limitations on the ability of stockholders to remove directors.

Limitations of Liability and Indemnification of Directors and Officers

Our Certificate of Incorporation limits the liability of directors to us and our stockholders to the fullest extent permitted by Delaware law. Specifically, a director will not be personally liable for monetary damages for breach of fiduciary duty as a director, except for liability:

- for any breach of the director's duty of loyalty to us or our stockholders;
- for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of the law;
- under Section 174 of the Delaware General Corporation Law, which concerns unlawful payments of dividends, stock purchases or redemptions; or
- for any transaction from which the director derived an improper personal benefit.

The Certificate of Incorporation provides that we shall indemnify our officers and directors to the fullest extent permitted by the Delaware General Corporation Law. We believe that these provisions will assist us in attracting and retaining qualified individuals to serve as directors.

RIGHTS PLAN

On June 25, 1996, our Board of Directors adopted a rights plan. Our rights plan, as amended, is designed to make it more costly and thus more difficult to gain control of us without the consent of our Board of Directors. The description presented below is intended as a summary only and is qualified in its entirety by reference to the rights agreement, as amended, which is an exhibit to the registration statement of which this prospectus is a part.

Our rights plan provides that each of our shares of common stock will have the right to purchase from us one one-thousandth of a share of a new Series A Preferred Stock at a price of $200 per one-thousandth of a share, subject to customary anti-dilution protection adjustment.

The rights are attached to all certificates representing outstanding shares of our common stock, and no separate right certificates have been distributed. The rights will separate from the shares of our common stock approximately 10 days after someone acquires beneficial ownership of 20% or more of the outstanding common stock, or commences a tender offer or exchange offer for 20% or more of the outstanding common stock.

After rights separate from our common stock, certificates representing the rights will be mailed to record holders of our common stock. Once distributed, the separate right certificates alone will represent the rights.

The rights are not exercisable until the date rights separate and will expire on June 25, 2006, unless extended or unless earlier redeemed or exchanged by us.

The shares of Series A Preferred Stock purchasable upon exercise of the rights are non-redeemable. Each share of Series A Preferred Stock has a minimum preferential quarterly dividend payment of $5.00 per share and an amount equal to 1,000 times the dividend declared per share of common stock. In the event of liquidation, the holders of Series A Preferred Stock will be entitled to a minimum preferential liquidation payment of $1,000 per share but will be entitled to an aggregate amount per share equal to 1,000 times the aggregate payment per share made to holders of common stock.

Each share of Series A Preferred Stock will have 1,000 votes, voting together with the shares of common stock. In the event of any merger, consolidation or other transaction in which shares of common stock are exchanged, each share of Series A Preferred Stock will be entitled to receive 1,000 times the amount received per share of common stock. The rights are protected by customary anti-dilution provisions.

If, after any person or group becomes an acquiring person, we are acquired in a merger or other business combination transaction or 50% or more of our consolidated assets or earning power are sold, each holder of a right will have a right to receive upon exercise of a right the number of

shares of common stock of the acquiring company, having a value equal to two times the exercise price of the right. If any person or group becomes an acquiring person, each holder of a right will have the right to receive upon exercise that number of shares of common stock having a market value of two times the exercise price of the right. Following the occurrence of the events described above, rights beneficially owned by any acquiring person at the time of such transaction will be void and may not be exercised.

At any time after any person or group becomes an acquiring person and prior to the acquisition by such person or group of 50% or more of the outstanding shares of common stock, the Board may exchange the rights (other than rights owned by such person or group which will have become void), in whole or in part, at an exchange ratio of one share of common stock or one one-thousandth of a share of Series A Preferred Stock (or of a share of a class or series of our preferred stock having equivalent rights, preferences and privileges) per right, subject to adjustment.

At any time prior to the acquisition by a person or group of affiliated or associated persons of beneficial ownership of 20% or more of the outstanding shares of common stock, the Board may redeem the rights in whole, but not in part, at a price of $0.01 per right.

The terms of the rights may generally be amended by the Board without the consent of the holders of the rights.

Until a right is exercised, the holder will have no rights as a stockholder.

The rights should not interfere with any merger or other business combination approved by the Board since the rights may be redeemed by us at the redemption price prior to the time that a person or group has acquired beneficial ownership of 20% or more of the common stock.

TRANSFER AGENT AND REGISTRAR

The transfer agent and registrar for our common stock is EquiServe.

SELLING SECURITYHOLDERS

This prospectus covers offers and sales by the selling securityholders of shares of our common stock issued upon exercise of the warrants. The following table sets forth, as of the date of the prospectus, a list of each selling securityholder who has completed a questionnaire and requested inclusion in this prospectus and the number of shares of our common stock beneficially owned by each of these selling securityholders, as well as the number of shares offered for resale by each of these selling securityholders. Shares that are beneficially owned include shares which the selling securityholders can acquire upon exercise of the warrants (all of which are currently exercisable) as well as shares they have already acquired upon exercise, if any, of the warrants and shares they may have otherwise acquired (although only sales of shares acquired upon exercise of the warrants are covered by this prospectus). Our registration of these shares does not necessarily mean that any named selling securityholder will exercise its warrants or will sell all or any of its shares of common stock. The "Shares Beneficially Owned After Offering" columns in the table assumes that all shares covered by this prospectus will be sold by the selling securityholders and that no additional shares of common stock are bought or sold by any selling securityholder since the date that it provided us with the information for the table.

Except as may be set forth in a prospectus supplement, none of the selling securityholders has held any position or office or had a material relationship with us or any of its affiliates within the past three years other than as a result of the ownership of our common stock and warrants to purchase our common stock.

Information about the selling securityholders may change over time. Relevant changed or new information about selling securityholders of which we have knowledge will be set forth in prospectus supplements. Additional selling securityholders may also be set forth in prospectus supplements. From time to time, additional information concerning ownership of the shares of common stock may rest with certain holders thereof not named in the table below and of whom we are unaware.

	SHARES BENEFICIALLY OWNED PRIOR TO OFFERING (1)		SHARES TO BE SOLD	SHARES BENEFICIALLY OWNED AFTER OFFERING (1) (3)	
BENEFICIAL OWNER	NUMBER OF	PERCENT		NUMBER OF	PERCENT

	SHARES (2)	SHARES
	*	*
TOTAL	379,229	

* Less than one percent (1%), based upon 40,420,975 shares of common stock outstanding as of December 26, 2001.

(1) Except as otherwise noted herein, the number and percentage of shares beneficially owned is determined in accordance with Rule 13d-3 of the Securities Exchange Act, and the information is not necessarily indicative of beneficial ownership for any other purpose. Under such rule, beneficial ownership includes any shares as to which the individual or entity has sole or shared voting power or investment power and also any shares which the individual or entity has the right to acquire within 60 days of the date of this prospectus through the exercise of any stock option or other right.

(2) Includes the shares of common stock underlying the warrants which may be sold under this prospectus.

(3) Assumes the sale of all the shares which may be sold under this prospectus.

PLAN OF DISTRIBUTION

As used in this prospectus, selling securityholder includes donees, pledgees, transferees and other successors-in-interest who sell shares received from the selling securityholder after the date of this prospectus as a gift, pledge, partnership distribution or other non-sale transfer.

The selling securityholders may offer and sell the shares of our common stock covered by this prospectus from time to time, subject to certain restrictions. The selling securityholders will act independently of us in making decisions with respect to the timing, manner and size of each sale. Sales may be made:

- in the open market;
- on the New York Stock Exchange or the Pacific Stock Exchange;
- in privately negotiated transactions;
- in an underwritten offering; or
- a combination of such methods.

Such sales may be made at varying prices determined by reference to, among other things:

- market prices prevailing at the time of sale;
- prices related to the then-prevailing market price; or
- negotiated prices.

Each selling securityholder may also transfer shares owned by it by gift, and upon any such transfer, the donee would have the same rights as the selling securityholder. Some of the selling securityholders may distribute their shares, from time to time, to their limited or general partners, members or stockholders who may sell shares pursuant to this prospectus.

Negotiated transactions may include purchases by a broker-dealer as principal and resale by such broker-dealer for its account pursuant to this prospectus, ordinary brokerage transactions and transactions in which a broker solicits purchasers, or block trades in which a broker-dealer so engaged will attempt to sell the shares as agent but may take a position and resell a portion of the block as principal to facilitate the transaction.

Distribution by the selling securityholders of the common stock covered by this prospectus may occur over an extended period of time. In effecting sales, broker-dealers hired by the selling securityholders may arrange for other broker-dealers to participate. Broker-dealers may receive commissions or discounts from the selling securityholders in amounts to be negotiated immediately prior to the sale.

In connection with the sale of common stock covered by this prospectus, underwriters or agents may receive compensation from the selling securityholders or from purchasers of the common stock, for which they may act as agent. Their compensation may be in the form of discounts, concessions or commissions. If underwriters sell common stock to or through dealers, then the dealers may receive compensation in the form of discounts, concessions or commissions from the underwriters and/or commissions from the purchasers for whom they act as agents. Neither we nor any selling securityholder can presently estimate the amount of that compensation. We know of no existing arrangements between any selling securityholders, any other securityholders, brokers, dealers, underwriters or agents relating to the sale or distribution of the shares of our common stock.

We will bear the expenses of registration under the Securities Act of 1933 as well as certain other fees and expenses. The selling securityholders will bear the cost of any commissions or selling expenses.

LEGAL MATTERS

The validity of any securities issued hereunder will be passed upon for our company by Fried, Frank, Harris, Shriver & Jacobson (a partnership including professional corporations), New York, New York.

EXPERTS

The consolidated financial statements of SPX as of December 31, 2000 and 1999 and for each of the three years in the period ended December 31, 2000, have been audited by Arthur Andersen LLP, independent public accountants. These financial statements and the report of the independent public accountants, included in SPX's Annual Report on Form 10-K/A filed on April 12, 2001, are incorporated by reference in this document.

The consolidated financial statements of UDI as of December 31, 2000 and 1999 and for each of the three years in the period ended December 31, 2000 have been audited by KPMG LLP, independent public accountants. These financial statements and the report of the independent public accountants, included in SPX's Current Report on Form 8-K filed on April 13, 2001, are incorporated by reference in this document.

PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

ITEM 14. OTHER EXPENSES OF ISSUANCE AND DISTRIBUTION.

The following table sets forth all fees and expenses payable by the registrant in connection with the issuance and distribution of the securities being registered hereby (other than underwriting discounts and commissions). All of such expenses, except the SEC registration fee, are estimated.

Securities and Exchange Commission registration fee.....	$ 4,605
New York Stock Exchange listing fee.....	1,650
Pacific Stock Exchange listing fee.....	950
Legal fees and expenses.....	40,000
Transfer Agent's fees and expenses.....	5,000
Accounting fees and expenses.....	15,000
Miscellaneous.....	795
Total.....	$ 68,000

ITEM 15. INDEMNIFICATION OF DIRECTORS AND OFFICERS.

LIMITATION ON LIABILITY OF DIRECTORS

Section 145(a) of the General Corporation Law of the State of Delaware (the "DGCL") provides that a Delaware corporation may indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative (other than an action by or in the right of the corporation) by reason of the fact that such person is or was a director, officer, employee or agent of the corporation or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation or enterprise, against expenses, judgments, fines and amounts paid in settlement actually and reasonably incurred by such person in connection with such action, suit or proceeding if he acted in good faith and in a manner he reasonably believed to be in or not opposed to the best interests of the corporation, and, with respect to any criminal action or proceeding, had no cause to believe his conduct was unlawful.

Section 145(b) of the DGCL provides that a Delaware corporation may indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action or suit by or in the right of corporation to procure a judgment in its favor by reason of the fact that such person acted in any of the capacities set forth above, against expenses actually and reasonably incurred by such person in connection with the defense or settlement of such action or suit if he or she acted under similar standards to those set forth above, except that no indemnification may be made in respect to any claim, issue or matter as to which such person shall have been adjudged to be liable to the corporation unless and only to the extent that the court in which such action or suit was brought shall determine that despite the adjudication of liability, but in view of all the circumstances of the case, such person is fairly and reasonably entitled to be indemnified for such expenses which the court shall deem proper.

Section 145 of the DGCL further provides that to the extent a director or officer of a corporation has been successful in the defense of any action, suit or proceeding referred to in subsections (a) and (b) or in the defense of any claim, issue or matter therein, he shall be indemnified against expenses actually and reasonably incurred by him in connection therewith; that indemnification provided for by Section 145 shall not be deemed exclusive of any other rights to which the indemnified party may be entitled; and that the corporation may purchase and maintain insurance on behalf of a director or officer of the corporation against any liability asserted against such officer or director and incurred by him or her in any such capacity or arising out of his or her status as such, whether or not the corporation would have the power to indemnify him or her against such liabilities under Section 145.

As permitted by Section 102(b)(7) of the DGCL, the Company's Certificate of Incorporation provides that a director shall not be personally liable to the Corporation or its stockholders for monetary damages for breach of fiduciary duty as a director. However, such provision does not eliminate or limit the liability of a director for: (i) any breach of the director's duty of loyalty to the Corporation or its stockholders, (ii) acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of the law, (iii) under Section 174 of the General Corporation Law of the State of Delaware, or (iv) engaging in any transaction from which the director derived an improper personal benefit. The Company's Certificate of Incorporation requires that directors and officers be indemnified to the fullest extent authorized by the DGCL, or any other applicable law or amendments thereunder; however, in the case of any amendments, only to the extent such amendment permits the Company to provide broader indemnification rights than permitted prior thereto.

Any underwriting agreements that we may enter into will likely provide for the indemnification of the registrant, its controlling persons, its directors and certain of its officers by the underwriters against certain liabilities, including liabilities under the Securities Act.

The Company has a policy of directors' liability insurance which insures the directors and officers against the cost of defense, settlement or payment of a judgment under certain circumstances.

ITEM 16. EXHIBITS AND FINANCIAL STATEMENTS SCHEDULES.

The exhibits to this registration statement are listed in the Exhibit Index to this registration statement, which Exhibit Index is hereby incorporated by reference.

ITEM 17. UNDERTAKINGS.

The undersigned registrant hereby undertakes:

(a)(1) To file, during any period in which offers or sales are being made of the securities registered hereby, a post-effective amendment to this registration statement:

(i) To include any prospectus required by Section 10(a)(3) of the Securities Act of 1933;

(ii) To reflect in the prospectus any facts or events arising after the effective date of this registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than a 20 percent change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement;

(iii) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement;

provided, however, that the undertakings set forth in clauses (i) and (ii) above do not apply if the registration statement is on Form S-3 and the information required to be included in a post-effective amendment by those clauses is contained in periodic reports filed by the registrant pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934 that are incorporated by reference in this registration statement;

(2) That, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities

offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof;

(3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering;

(b) That, for the purposes of determining any liability under the Securities Act of 1933, each filing of our annual report pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934 (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Securities Exchange Act of 1934) that is incorporated by reference in this registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof; and

(c) To deliver or cause to be delivered with the prospectus, to each person to whom the prospectus is sent or given, the latest annual report, to security holders that is incorporated by reference in the prospectus and furnished pursuant to and meeting the requirements of Rule 14a-3 or Rule 14c-3 under the Securities Exchange Act of 1934; and, where interim financial information required to be presented by Article 3 of Regulation S-X are not set forth in the prospectus, to deliver, or cause to be delivered to each person to whom the prospectus is sent or given, the latest quarterly report that is specifically incorporated by reference in the prospectus to provide such interim financial information.

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

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 and has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Charlotte, State of North Carolina, on the 17th day of January, 2002.

SPX CORPORATION

/s/ Patrick J. O'Leary

Patrick J. O'Leary
Vice President Finance, Treasurer
and Chief Financial Officer

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS, that each of the undersigned constitutes and appoints Patrick O'Leary, Charles Bowman and Christopher Kearney, and each of them, his true and lawful attorneys-in-fact and agents, with full power of substitution and resubstitution, for him and in his name, place and stead, in any and all capacities, to sign this registration statement (including all pre-effective and post-effective amendments thereto and all registration statements filed pursuant to Rule 462(b) which incorporate this registration statement by reference), and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto such attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done in and about the premises, as fully to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that such attorneys-in-fact and agents or any of them, or their or his substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, as amended, this registration statement has been signed by the following persons on January 17, 2002 in the capacities indicated below.

Signature	Title
/s/ John B. Blystone John B. Blystone	Chairman, President and Chief Executive Officer (Principal Executive Officer)
/s/ Patrick J. O'Leary Patrick J. O'Leary	Vice President Finance, Treasurer and Chief Financial Officer (Principal Financial Officer)
/s/ Ron Winowiecki Ron Winowiecki	Corporate Controller and Chief Accounting Officer (Principal Accounting Officer)
/s/ J. Kermit Campbell J. Kermit Campbell	Director
/s Sarah R. Coffin Sarah R. Coffin	Director
/s/ Frank A. Ehmann Frank A. Ehmann	Director
/s Emerson U. Fullwood Emerson U. Fullwood	Director
/s/ Charles E. Johnson II Charles E. Johnson II	Director
/s/ David P. Williams David P. Williams	Director

EXHIBIT INDEX

Exhibit Number	Description of Exhibit
*4.1	Rights Agreement dated as of June 25, 1996 (the "Rights Agreement") between SPX Corporation and The Bank of New York, as Rights Agent, relating to Rights to purchase preferred stock under certain circumstances, incorporated herein by reference to SPX Corporation's Registration Statement on Form 8-A filed on June 26, 1996.
*4.2	Form of Amendment No. 1 to Rights Agreement, effective as of October 22, 1997, between SPX Corporation and The Bank of New York, incorporated herein by reference from SPX Corporation's Registration Statement on Form 8-A, filed on January 9, 1998.
4.3	Warrant Agreement, dated as of April 23, 1987 (the "Warrant Agreement"), among GCA Corporation, The Hallwood Group Incorporated, and the banks and insurance companies set forth therein.
4.4	Warrant Agreement, dated as of September 1, 1987 (the "Zeiss Warrant Agreement"), between GCA Corporation and Carl Zeiss, Inc.
4.5	Registration Agreement, dated as of April 23, 1987, among GCA Corporation, the banks and insurance companies set forth therein and Carl Zeiss, Inc.
4.6	Registration Agreement, dated as of September 1, 1987, among GCA Corporation and Carl Zeiss, Inc.
4.7	Form of Warrant Certificate pursuant to the Warrant Agreement.
4.8	Form of Warrant Certificate for Carl Zeiss, Inc. pursuant to the Zeiss Warrant Agreement.
5.1	Opinion of Fried, Frank, Harris, Shriver & Jacobson.
23.1	Consents of Fried, Frank, Harris, Shriver & Jacobson (included in Exhibit 5.1).
23.2	Consent of Arthur Andersen LLP.
23.3	Consent of KPMG LLP.
24.1	Powers of Attorney (included on signature page).

- ------------
* Incorporated by reference.

Exhibit 4.3

WARRANT AGREEMENT

WARRANT AGREEMENT, dated as of April 23, 1987, among GCA Corporation, a Delaware corporation (the "Company"), The Hallwood Group Incorporated, a Delaware corporation ("Hallwood"), and each of the banks and insurance companies listed on Schedule I hereto (other than TIAA) and Teachers Insurance and Annuity Association of America ("TIAA") (collectively, the "Lender Group").

W I T N E S S E T H:
- - - - - - - - - -

WHEREAS, Hallwood and the Lender Group (other than TIAA) are parties to that certain Restructuring Agreement, dated as of December 5, 1986 (the "Restructuring Agreement"), as amended; and

WHEREAS, Hallwood and TIAA are parties to that certain letter agreement dated December 5, 1986 (the "TIAA Agreement"); and

WHEREAS, it is a condition, among others, to the obligations of the Lender Group (other than TIAA) under the Restructuring Agreement that, prior to the Closing under the Restructuring Agreement, the Company execute and deliver this Agreement relating to the issuance and sale of warrants (the "Warrants") to purchase shares of common stock, par value $.01 per share (the "Common Stock"), of the Company; and

WHEREAS, it is a condition, among others, to the obligations of TIAA under the TIAA Agreement that prior to the Closing under the TIAA Agreement, the Company execute and deliver this Agreement relating to the issuance and sale of the Warrants;

NOW, THEREFORE, in consideration of the premises and of the mutual covenants hereinafter set forth, the Company, Hallwood and the Lender Group agree as follows:

Section 1. Defined Terms. Capitalized terms used in this Agreement, unless separately defined herein, shall have the meanings ascribed to such terms in the Restructuring Agreement.

Section 2. Form of Warrant. The Warrants shall be substantially in the form attached as Exhibit A hereto.

Section 3. Number of Warrant Shares. The aggregate number of Common Shares issuable upon the exercise of Warrants ("Warrant Shares") shall be 2,190,806 (after giving effect to the 1-for-50 reverse stock split of the Common Stock contemplated to occur on April 24, 1987), allocated among the Lender Group as set forth on Schedule I hereto. The Warrants will be exercisable at any time or from time to time until April 23, 2002 at an exercise price per share equal to 150% of the book value per share of the Common Stock, determined in accordance with generally accepted accounting principles, on the last day of the fiscal month of the Company in which the Closing takes place. Promptly (and in any event within 15 days) following the last fiscal day of such month, the Company shall give notice to each holder of the Warrants of the exercise price thereof, and if requested, a new Warrant certificate confirming such price. The number of Warrant Shares and the exercise price thereof shall be subject to adjustment as provided in the Warrants.

Section 4. Issuance and Delivery of Warrants. (a) At the Closing, the Company shall execute, issue and deliver to each of the Banks and the Insurance Companies and to TIAA a Warrant for the exercise of that number of shares of Common Stock set forth opposite its name on Schedule I hereto.

(b) Hallwood hereby agrees that each of the Insurance Companies (which term does not include TIAA) shall have the right, exercisable upon not less than 30 days' prior written notice to Hallwood, given at any time or times within one year following the date of the Closing, to require Hallwood to purchase from such Insurance Company for cash, on such date as shall be specified in such notice, such number of Warrants as shall be listed opposite the name of such member of the Lender Group on Schedule I hereto. The amount that Hallwood shall pay to any such Insurance Company for each Warrant shall be (i) $750,000 multiplied by (ii) a fraction, (A) the numerator of which shall be the outstanding principal amount of Insurance Company Debt owed to such Insurance Company by the Company at August 31, 1986 and (B) the denominator of which shall be the aggregate outstanding principal amount of Insurance Company Debt at such date, (iii) divided by the maximum number of Warrants that Hallwood is obligated to repurchase pursuant to this Section 4(b). In connection with each of its sales and purchases of any Warrants from an Insurance Company pursuant hereto, Hallwood shall deliver upon the purchase of any Warrant to

such Insurance Company all such additional written assurances and other documents as may be reasonably requested by such Insurance Company with respect to such matters as the exemption of such purchase transaction from the registration, prospectus delivery and qualification requirements of Federal and applicable state securities laws, including, without limitation, an opinion of Hallwood's counsel reasonably satisfactory to the seller of the Warrants to such effect together with a written representation and warranty by Hallwood that it is acquiring all such Warrants which it receives pursuant to this section 4(b) for investment purposes only and not with a view to the resale or distribution thereof. Hallwood hereby acknowledges the absolute and unconditional nature of its obligation to purchase Warrants pursuant to this paragraph notwithstanding the existence of any and all defenses, set-offs, counterclaims or any other basis for non-fulfillment of such obligation, it being the intent of the parties hereto that Hallwood be and remain bound to the Insurance Companies to purchase the Warrants as provided in this Section, notwithstanding any agreement between it and any other party.

Section 5. Reservation of Warrant Shares, Etc. The Company covenants and agrees that, at all times following the issuance of the Warrants to the Lender Group, it shall cause to be reserved out of its holdings of authorized and unissued Common Stock such number of shares of Common Stock as shall be issuable upon the exercise of the Warrants then outstanding in accordance with the terms of such Warrants and this Warrant Agreement.

Section 6. Replacement Warrants. In case any Warrant shall be at any time mutilated, lost or destroyed, then, upon the production of such mutilated Warrant (or the receipt of an affidavit of an officer of the Holder as to the circumstances surrounding the loss or destruction of such Warrant) and, in the case of the loss of a Warrant, the receipt of an unsecured written agreement to indemnify the Company in the event of a loss suffered by it as a result of the loss of a Warrant, the Company shall execute and deliver a new Warrant of like tenor for that number of shares of Common Stock for which such lost or mutilated Warrant could have been exercised. Any stamp tax or other governmental charge payable upon the issuance of any replacement Warrant shall be borne by the holder thereof. Any replacement Warrants executed and delivered pursuant to this Section 6 shall be entitled to equal and proportionate benefits of this Warrant Agreement with all other Warrants issued hereunder, whether or not the allegedly lost or destroyed Warrant shall be enforceable by any person, firm, corporation or other entity.

Section 7. Certain Expenses. The Company shall pay when due any and all federal, state and local issue or transfer taxes which may be payable in respect to the initial issuance by the Company of the Warrants, and all federal, state or local issue or transfers taxes that may be payable with respect to the initial issuance of the Warrant Shares. The Company shall not be required to pay any tax that may be payable in respect of any transfer of Warrants or Warrant Shares or in respect of the issuance of Warrant Shares to any person other than the registered holder of such Warrant at the time of such exercise.

Section 8. Representation and Agreement of the Lender Group; Transfers. (a) Each of the Banks and the Insurance Companies and TIAA hereby represents and warrants to the Company and Hallwood that it is acquiring its Warrants for investment purposes only and not with a view to the resale or distribution thereof.

(b) Each member of the Lender Group and each holder of a Warrant, by the acceptance thereof, agrees that prior to the exercise of any Warrant, unless the Warrant Shares have been registered under the Securities Act of 1933, as amended (the "Act"), or any similar Federal statute for sale or other disposition by such holder and a prospectus with respect thereto is current, or unless such holder shall have delivered to the Company an opinion of counsel reasonably satisfactory to the Company to the effect that no such registration is required, it will deliver to the Company a written representation that it is acquiring the Warrant Shares for its own account for investment purposes only and not with a view to the resale or distribution thereof, subject to any requirement of law that its disposition of such property be at all times within its control.

(c) Each member of the Lender Group and each holder of a Warrant, by acceptance thereof, covenants and agrees that it will not sell, transfer or dispose (hereinafter, a "Disposition") of any Warrant (or any interest in any Warrant) or any Common Stock issuable or issued upon the exercise of any Warrant (or any interest in any such Common Stock), except in compliance with the provisions of the Act and the rules and regulations promulgated thereunder, or any similar Federal statute and rules and regulations promulgated thereunder. With respect to any Disposition of a Warrant or any Common Stock issued pursuant to the exercise of a Warrant or any interest therein, unless a registration statement under the Act is

effective and the prospectus included therein is current, the holder of such Warrant or Common Stock shall, as a condition of such Disposition, provide the Company with (i) an appropriate opinion of counsel that the proposed Disposition may be made without registration in form and substance satisfactory to the Company, or (ii) a letter from the staff of the Securities and Exchange Commission (the "Commission") or any similar Federal regulatory body, to the effect that the staff will not recommend that the Commission take any action if the proposed Disposition is made without registration under the Act, or (iii) evidence satisfactory to the Company (which, in appropriate circumstances, may include an opinion of counsel) that such Disposition is in compliance with the provisions of Rule 144 (or any similar rule then in effect) promulgated under the Act.

(d) Each Warrant and each certificate for shares of Common Stock that is the subject of such Warrant shall, bear an appropriate legend to reflect that the issuance thereof has not been registered under the Act and each member of the Lender Group and each holder of Warrant, by acceptance thereof, acknowledges the same.

(e) The Company shall be required to issue promptly a new Warrant or Common Stock issued upon exercise of a Warrant (such Common Stock or Warrant not to bear a restrictive legend if the Company reasonably determines that such legend is not required in order to comply with applicable federal and state securities laws) if (i) a Disposition of a Warrant or the Common Stock issued upon exercise of a Warrant is made pursuant to a registration statement (including a current prospectus) that is effective under the Act (such Warrant or Common Stock, as the case may be, to be without a restrictive legend), (ii) the staff of the Commission shall have issued a letter to the effect that it will not recommend that the Commission take any action if the proposed Disposition is made without registration under the Act, or (iii) counsel to the holder thereof shall have rendered its opinion, which opinion shall be reasonably acceptable to the Company, that the Disposition of such securities may be made without registration under the Act, or (iv) the Company shall have been furnished with evidence satisfactory to the Company (which, in appropriate circumstances, may include an opinion of counsel) that the Disposition of such securities is in compliance with Rule 144 (or any similar rule then in effect) promulgated under the Act.

Section 9. Representations and Warranties of the Company. The Company represents and warrants to the Lender Group as follows:

(a) Organization and Good Standing. The Company is a corporation duly organized, validly existing and in good standing under the laws of the State of Delaware, and has full corporate power and authority to own its properties and carry on its business as it is now being conducted. The Company is duly qualified as a foreign corporation and is in good standing under the laws of each jurisdiction in which the conduct of its business or the ownership of its assets requires such qualification, except where its failure to be so qualified would not have a material adverse effect on the business, properties, assets or financial condition of the Company and its subsidiary, taken as a whole.

(b) Due Authorization; No Conflicts; Governmental Consents. This Agreement has been duly authorized, executed and delivered by the Company and this Agreement constitutes, and, upon execution, issuance and delivery thereof each of the Warrants will constitute, a valid and binding agreement of the Company, enforceable in accordance with its terms. Neither the performance of this Agreement and the consummation of the transactions contemplated hereby, nor the issuance of any of the Warrant Shares upon exercise of the Warrants, will result in a breach or violation of any of the terms and provisions of, or constitute a default under, any indenture, mortgage, deed of trust, voting trust agreement, loan agreement, bond, debenture, note agreement or other evidence of indebtedness, lease, contract or other agreement or instrument to which the Company is a party or by which the Company or any of its properties is bound, or under the Articles of Incorporation or By-Laws of the Company or under any statute, rule, regulation or order of any governmental body or court applicable to the Company, and no consent, approval, authorization or order of any court or governmental body is required for the consummation by the Company of the transactions on its part herein contemplated.

(c) Capitalization. The authorized capital stock of the Company consists of (a) 750,000,000 shares of common stock, par value $.01 per share (hereinafter referred to as the "Common Stock"), 9,464,295 shares of which are validly issued and outstanding as of the date hereof (after giving effect to the 1-for-50 reverse stock split contemplated to occur on April 24, 1987), and (b) 1,000,000 shares of preferred stock, par value $1.00 per share, no shares of which are issued or outstanding. All of the issued and outstanding shares of Common Stock are fully paid, non-assessable and free of preemptive rights and no personal liability attaches to the ownership thereof. Except (i) as disclosed in the Company's

prospectus dated February 11, 1987, and (ii) for the transactions contemplated by the Restructuring Agreement and the TIAA Agreement, there is no existing option, warrant, call, commitment or other agreement to which the Company is a party requiring, and there are no convertible securities of the Company outstanding which upon conversion would require, the issuance of any additional shares of Common Stock of the Company or other securities convertible into shares of Common Stock or any other equity security of the Company. The Warrants and the Warrant Shares have been duly and validly authorized and reserved for issuance and, upon issuance and payment for the Warrant Shares as provided in the Warrants, the Warrant Shares will be duly and validly issued, fully-paid, nonassessable and free of preemptive rights and no personal liability will attach to the ownership thereof.

Section 10. Registration Rights. On the terms and subject to the conditions of the Registration Agreement attached as Exhibit B hereto, the Company agrees to provide the registration rights provided therein with respect to the Warrant Shares. At the Closing, the Company and the Lender Group shall execute and deliver the Registration Agreement.

Section 11. Governing Law. This agreement shall be governed by the laws of the State of New York.

Section 12. Notices. All notices provided for herein shall be given or made by certified mail or hand delivery, mailed or delivered to the intended recipient at the "Address for Notices" specified below its name on the signature pages hereof; or, as to any party, at such other address as shall be designated by such party in a notice to each other party. Except as otherwise provided in this Agreement, all such communications shall be deemed to have been duly given when deposited in the mails or personally delivered.

Section 13. Counterparts; Effectiveness. This Agreement may be executed in any number of counterparts and each of said counterparts shall for all purposes be deemed to be an original, and all such counterparts shall together constitute but one and the same instrument. This Agreement shall become effective upon the Closing.

Section 14. Successors and Assigns. This Agreement shall be binding upon and inure to the benefit of the Company, Hallwood and the Lender Group and their respective successors and assigns.

Section 15. Amendment; Waiver. This Agreement may be amended or modified, and any provision of this Agreement may be waived, by a writing executed by all of the parties hereto.

IN WITNESS WHEREOF, the parties have caused this Agreement to be executed by their duly authorized officers as of the date first above written.

GCA CORPORATION

By
---
7 Shattuck Road
Andover, Massachusetts 01810
Attention: General Counsel

THE HALLWOOD GROUP INCORPORATED

By
---
767 Third Avenue
New York, New York 10017

BANK OF NEW ENGLAND, N.A.

By
---
28 State Street
Boston, Massachusetts 02109
Attn: Cynthia Sackett
Assistant Vice President

BARCLAYS BANK PLC (formerly known as
"Barclays Bank International Limited")

By
---

75 Wall Street
New York, New York 10265
Attn: Advance Department

MANUFACTURERS HANOVER TRUST COMPANY

By
---
270 Park Avenue, 29th Floor
New York, New York 10017
Attn: Gregory Harbaugh
Vice President

MANUFACTURERS HANOVER LEASING CORPORATION

By
---
270 Park Avenue
New York, New York 10017
Attn: Margaret A. Gillis
Vice President

MELLON FINANCIAL SERVICES CORPORATION
LEASING GROUP (formerly known as
"Mellon National Leasing Corporation")

By

3030 One Mellon Bank Center
Pittsburgh, Pennsylvania 15258
Attn: Ann Richardson

TEACHERS INSURANCE AND ANNUITY
ASSOCIATION OF AMERICA

By
---
730 Third Avenue
New York, New York 10017
Attn: Securities Division

GENERAL AMERICAN LIFE INSURANCE COMPANY

By

P.O. Box 396
St. Louis, Missouri 63166

HOME LIFE INSURANCE COMPANY

By
---
253 Broadway
New York, New York 10007
Attn: Securities Department

THE PENN MUTUAL LIFE INSURANCE COMPANY

By
---
530 Walnut Street
Philadelphia, Pennsylvania 19172
Attn: Securities Department

THE UNION CENTRAL LIFE INSURANCE COMPANY

By

P.O. Box 179
Cincinnati, Ohio 45201

THE UNION LABOR LIFE INSURANCE COMPANY

By
  ----
111 Massachusetts Ave., N.W.
Washington, D.C. 20001
Attn: Barbara Riley

PAN AMERICAN LIFE INSURANCE COMPANY

By
  ----
601 Poybras Street
Pan American Life Center
New Orleans, Louisiana 70130
Attn: 28th Floor Investments

BERKSHIRE LIFE INSURANCE COMPANY

By
  ----
700 South Street
Pittsfield, Massachusetts 01201
Attn: Securities Department

Exhibit 4.4

WARRANT AGREEMENT

WARRANT AGREEMENT, dated as of September 1, 1987, among GCA Corporation (the "Company"), a Delaware corporation, having its principal place of business at 7 Shattuck Road, Andover, Massachusetts 01810, and Carl Zeiss, Inc. ("Zeiss"), a New York corporation having its principal place of business at 1 Zeiss Drive, Thornwood, New York 10594.

WITNESSETH:

WHEREAS, GCA and Zeiss are parties to a certain Agreement dated as of September 1, 1987 (the "Lens Supply Agreement"); and

WHEREAS, it is a condition, among others, to the obligations of Zeiss under the Lens Supply Agreement that GCA execute and deliver this agreement relating to the issuance and sale of warrants ("Warrants") to purchase shares of common stock, par value $.01 per share (the "Common Stock"), of the Company;

NOW, THEREFORE, in consideration of the premises and of the mutual covenants hereinafter set forth, the Company and Zeiss agree as follows:

Section 1. Defined Terms. Capitalized terms used in this Agreement, unless separately defined herein, shall have the meanings ascribed to such terms in the Restructuring Agreement dated as of December 5, 1986 among the Company, Zeiss, The Hallwood Group Incorporated and certain lenders to the Company.

Section 2. Form of Warrant. The Warrant shall be substantially in the form attached as Exhibit A hereto.

Section 3. Number of Warrant Shares. The aggregate number of Common Shares issuable upon the exercise of the Warrant ("Warrant Shares") shall be 500,000. The Warrant will be exercisable at any time or from time to time until September 1, 2002 at an exercise price of $13.32 per Warrant Share. The number of Warrant Shares and the exercise price of the Warrant Shares shall be subject to adjustment as provided in the Warrant.

Section 4. Issuance and Delivery of Warrant. Simultaneously with the execution hereof, the Company shall execute, issue and deliver to Zeiss a warrant for the exercise of 500,000 shares of Common Stock of the Company.

Section 5. Reservation of Warrant Shares, Etc. The Company covenants and agrees that, at all times following the issuance of the Warrant to Zeiss, it shall cause to be reserved out of its holdings of authorized and unissued Common Stock such number of shares of Common Stock as shall be issuable upon the exercise of the Warrant then outstanding in accordance with the terms of such Warrant and this Warrant Agreement.

Section 6. Replacement Warrants. In case any Warrant shall be at any time mutilated, lost or destroyed, then, upon the production of such mutilated Warrant (or the receipt of an affidavit of an officer of the Holder as to the circumstances surrounding the loss or destruction of such Warrant) and, in the case of the loss of a Warrant, the receipt of an unsecured written agreement to indemnify the Company in the event of a loss suffered by it as a result of the loss of such Warrant, the Company shall execute and deliver a new Warrant of like tenor for that number of shares of Common Stock for which such lost or mutilated Warrant could have been exercised. Any stamp tax or other governmental charge payable upon the issuance of any replacement Warrant shall be borne by the holder thereof. Any replacement Warrants executed and delivered pursuant to this Section 6 shall be entitled to equal and proportionate benefits of this Warrant Agreement with all other Warrants issued hereunder, whether or not the allegedly lost or destroyed Warrant shall be enforceable by any person, firm, corporation or other entity.

Section 7. Certain Expenses. The Company shall pay when due any and all federal, state and local issue or transfer taxes which may be payable in respect to the initial issuance by the Company of the Warrant, and all federal, state or local issue or transfers taxes that may be payable with respect to the initial issuance of the Warrant Shares. The Company shall not be required to pay any tax that may be payable in respect of any transfer of the Warrant or Warrant Shares or in respect of the issuance of Warrant Shares to any person other than the registered holder of such Warrant at the time of such exercise.

Section 8. Representation and Agreement of Zeiss; Transfers.

(a) Zeiss hereby represents and warrants to the Company that it is acquiring its Warrant for investment purposes only and not with a view to the resale or distribution thereof.

(b) Zeiss and each successor holder of the Warrant, by the acceptance thereof, agrees that prior to the exercise thereof, unless the Warrant Shares have been registered under the Securities Act of 1933, as amended (the "Act"), or any similar Federal statute for sale or other disposition by such holder and a prospectus with respect thereto is current, or unless such holder shall have delivered to the Company an opinion of counsel reasonably satisfactory to the Company to the effect that no such registration is required, it will deliver to the Company a written representation that it is acquiring the Warrant Shares for its own account for investment purposes only and not with a view to the resale or distribution thereof, subject to any requirement of law that its disposition of such property be at all times within its control.

(c) Zeiss and each successor holder of the Warrant, by acceptance thereof, covenants and agrees that it will not sell, transfer or dispose (hereinafter, a "Disposition") of the Warrant (or any interest in any Warrant) or any Common Stock issuable or issued upon the exercise of any Warrant (or any interest in any such Common Stock), except in compliance with the provisions of the Act and the rules and regulations promulgated thereunder, or any similar Federal statute and rules and regulations promulgated thereunder. With respect to any Disposition of the Warrant or any Common Stock issued pursuant to the exercise of the Warrant or any interest therein, unless a registration statement under the Act is effective and the prospectus included therein is current, the holder of such Warrant or Common Stock shall, as a condition of such Disposition, provide the Company with (i) an appropriate opinion of counsel that the proposed Disposition may be made without registration in form and substance satisfactory to the Company, or (ii) a letter from the staff of the Securities and Exchange Commission (the "Commission") or any similar Federal regulatory body, to the effect that the staff will not recommend that the Commission take any action if the proposed Disposition is made without registration under the Act, or (iii) evidence satisfactory to the Company (which, in appropriate circumstances, may include an opinion of counsel, that such Disposition is in compliance with the provisions of Rule 144 (or any similar rule then in effect) promulgated under the Act.

(d) Each Warrant and each certificate for shares of Common Stock that is the subject of such Warrant shall bear an appropriate legend to reflect that the issuance thereof has not been registered under the Act, and Zeiss and each successor holder of the Warrant, by acceptance thereof, acknowledges the same.

(e) The Company shall be required to issue promptly a new Warrant or Common Stock issued upon exercise of the Warrant (such Common Stock or Warrant not to bear a restrictive legend if the Company reasonably determines that such legend is not required in order to comply with applicable federal and state securities laws) if (i) a Disposition of a Warrant or the Common Stock issued upon exercise of the Warrant is made pursuant to a registration statement (including a current prospectus) that is effective under the Act (such Warrant or Common Stock, as the case may be, to be without a restrictive legend), or (ii) the staff of the Commission shall have issued a letter to the effect that it will not recommend that the Commission take any action if the proposed Disposition is made without registration under the Act, or (iii) counsel to the holder thereof shall have rendered its opinion, which opinion shall be reasonably acceptable to the Company, that the Disposition of such securities may be made without registration under the Act, or (iv) the Company shall have been furnished with evidence satisfactory to the Company (which, in appropriate circumstances, may include an opinion of counsel) that the Disposition of such securities is in compliance with Rule 144 (or any similar rule then in effect) promulgated under the Act.

Section 9. Representations and Warranties of the Company. The Company represents and warrants to Zeiss as follows:

(a) Organization and Good Standing. The Company is a corporation duly organized, validly existing and in good standing under the laws of the State of Delaware, and has full corporate power and authority to own its properties and carry on its business as it is now being conducted. The Company is duly qualified as a foreign corporation and is in good standing under the laws of each jurisdiction in which the conduct of its business or the ownership of its assets requires such qualification, except where its failure to be so qualified would not have a material adverse effect on the business, properties, assets or financial condition of the Company and its subsidiary, taken as a whole.

(b) Due Authorization; No Conflicts; Governmental Consents. This Agreement has been duly authorized, executed and delivered by the Company and this Agreement constitutes, and, upon execution, issuance and delivery thereof, the Warrant will constitute, a valid and binding agreement of the Company, enforceable in accordance with its terms. Neither the performance of this Agreement and the consummation of the transactions contemplated hereby, nor the issuance of any of the Warrant Shares upon exercise of the Warrant, will result in a breach or violation of any of the terms and provisions of, or constitute a default under, any indenture, mortgage, deed of trust, voting trust agreement, loan agreement, bond, debenture, note agreement or other evidence of indebtedness, lease, contract or other agreement or instrument to which the Company is a party or by which the Company or any of its properties is bound, or under Articles of Incorporation or By-Laws of the Company or under any statute, rule, regulation or order of any governmental body or court applicable to the Company, and no consent, approval, authorization or order of any court or governmental body is required for the consummation by the Company of the transactions on its part herein contemplated.

(c) Capitalization. The authorized capital stock of the Company consists of (a) 750,000,000 shares of common stock, par value $.01 per share (hereinafter referred to as the "Common Stock"), 9,467,642 shares of which are validly issued and outstanding as of July 1, 1987, and (b) 1,000,000 shares of preferred stock, par value $1.00 per share, no shares of which are issued or outstanding as of the date hereof. All of the issued and outstanding shares of Common Stock are fully paid, non-assessable and free of preemptive rights and no personal liability attaches to the ownership thereof. Except (i) as disclosed in the Company's prospectus dated February 11, 1987, (ii) as disclosed in the Company's Proxy Statement dated April 27, 1987, (iii) for options to purchase an aggregate of 300,000 shares of the Common Stock of the Company dated July, 1987 granted to an officer of the Company, and (iv) for outstanding warrants to purchase an aggregate of 2,190,800 shares of the Common Stock of the Company issued pursuant to the Restructuring Agreement dated as of December 5, 1986, among the Company, The Hallwood Group Incorporated, certain lenders to the Company and Zeiss, there is no existing option, warrant, call, commitment or other agreement to which the Company is a party requiring, and there are no convertible securities of the Company outstanding which upon conversion would require, the issuance of any additional shares of Common Stock of the Company or other securities convertible into shares of Common Stock or any other equity security of the Company. The Warrant and the Warrant Shares have been duly and validly authorized and reserved for issuance and, upon issuance and payment for the Warrant Shares as provided in the Warrant, the Warrant Shares will be duly and validly issued, fully-paid, non-assessable and free of preemptive rights and no personal liability will attach to the ownership thereof.

Section 10. Registration Rights. On the terms and subject to the conditions of the Registration Agreement executed simultaneously herewith, the Company agrees to provide the registration rights provided therein with respect to the Warrant Shares.

Section 11. Rights of Parties Upon Sale of Warrant Shares. In the event that the Warrant is exercised at any time by any Holder thereof, and the Warrant Shares which are issued upon exercise thereof are subsequently sold by the Warrant Holder for a price in excess of $24.00 per share, subject to adjustment in accordance with Section 4 of Exhibit A hereto, then in such event 50% of the net sales proceeds, after deducting fees and commissions of sale and reasonable legal expenses borne by the Warrant Holder, shall be remitted to the Company within thirty days after receipt thereof by the Seller of the Warrant Shares.

Section 12. Governing Law. This agreement shall be governed by the laws of the State of New York.

Section 13. Notices. All notices provided for herein shall be given or made by certified mail or hand delivery, mailed or delivered to the intended recipient at the address specified below its name on the signature page hereof; or, as to any party, at such other address as shall be designated by such party in a notice to each other party. Except as otherwise provided in this Agreement, all such communications shall be deemed to have been duly given when deposited in the mails or personally delivered.

Section 14. Counterparts; Effectiveness. This Agreement may be executed in any number of counterparts and each of said counterparts shall for all purposes be deemed to be an original, and all such counterparts shall constitute but one and the same instrument. This Agreement shall become effective upon execution by both parties.

Section 15. Successors and Assigns. This Agreement shall be

binding upon and inure to the benefit of the parties and their respective successors and assigns.

Section 16. Amendment; Waiver. This Agreement may be amended or modified, and any provision of this Agreement may be waived, only by a writing executed by both of the parties hereto.

IN WITNESS WHEREOF, the parties have caused this Agreement to be executed by their duly authorized officers as of the date first above written.

GCA CORPORATION

By

(Name and Title)
7 Shattuck Road
Andover, Massachusetts 01810
Attention: General Counsel

CARL ZEISS, INC.

By

(Name and Title)
1 Zeiss Drive
Thornwood, New York 10549
Attention: Corporation Secretary

Exhibit 4.5

GCA CORPORATION

REGISTRATION AGREEMENT

Registration Agreement, dated as of April 23, 1987, among GCA Corporation, a Delaware corporation (the "Company"), and each of the banks and insurance companies listed on the signature pages hereof, and Carl Zeiss, Inc. (individually, a "Lender" and collectively, the "Lender Group"). Terms not otherwise defined herein shall have the meaning ascribed to them in the Warrant Agreement.

W I T N E S S E T H

WHEREAS, The Hallwood Group Incorporated, a Delaware corporation ("Hallwood"), and the Lender Group (other than TIAA) are parties to that certain Restructuring Agreement, dated as of December 5, 1986 (the "Restructuring Agreement"), as amended; and

WHEREAS, Hallwood and Teachers Insurance & Annuity Association of America ("TIAA") are parties to that certain letter agreement dated December 5, 1986; and

WHEREAS, the Company and the Lender Group are parties to that certain Warrant Agreement of even date herewith (the "Warrant Agreement"), pursuant to which the Company has issued to the Lender Group warrants (the "Warrants") to purchase 2,190,806 shares (after giving effect to the 1-for-50 reverse stock split of the common stock (as hereinafter defined) contemplated to occur on April 24, 1987) of common stock, $.01 par value per share, of the Company (the "Common Stock"); and

WHEREAS, the Warrant Agreement provides that at the Closing the Company and the Lender Group shall execute and deliver this Agreement;

NOW, THEREFORE, in consideration of the premises and of the mutual covenants hereinafter set forth, the Company and the Lender Group agree as follows:

1. Defined Terms. Capitalized terms used in this Agreement, unless separately defined herein, shall have the meanings ascribed to such terms in the Restructuring Agreement or the Warrant Agreement.

2. Demand Registrations. (a) At any time after the Closing, the holders of at least 20% of the Warrant Shares outstanding at the time (equitably adjusted to reflect stock splits, stock dividends, combinations or similar events and adjustments pursuant to Paragraph 5 of the Warrants) may request registration under the Securities Act of 1933, as amended (the "Securities Act"), of all or part of their Warrant Shares on Form S-1 or any other form available for the registration of the Warrant Shares ("Demand Registrations"). Within 10 days after receipt of any such request, the Company shall give written notice of such request to all other holders of the Warrant Shares and shall, subject to the provisions of Section 2(c) hereof, include in such registration all Warrant Shares with respect to which the Company has received written requests for inclusion therein within 30 days after the receipt of the Company's notice.

(b) Subject to the provisions of Section 2(a), the holders of the Warrant Shares shall be entitled to request three Demand Registrations, and the Company shall pay all Registration Expenses (as defined in Section 6 hereof) in connection therewith. A registration shall not count as one of the three permitted Demand Registrations (i) until the registration has become effective, or (ii) if the holders initiating the request for such registration are not able to register and sell at least 66-2/3% of the shares of Common Stock requested by such holders to be included in such registration. In any event, the Company shall pay all Registration Expenses in connection with any registration initiated as a Demand Registration, whether or not consummated.

(c) In the event that the managing underwriters of the requested Demand Registration advise the Company in writing that in their judgment in order to effect an orderly public distribution the number of Warrant Shares proposed to be included in any such Demand Registration must be limited, the Company shall include in such registration only the number of Warrant Shares which, in the opinion of such underwriters, can be sold in an orderly public distribution, such limitation to be imposed pro rata among the holders of the Warrant Shares who are participating in such registration on the basis of the amount of such securities initially proposed to be registered by such holder.

(d) The Company shall not be obligated to effect any Demand Registration within six months after the effective date of a previous Demand Registration or a previous registration under which each holder of Warrant Shares was given piggyback rights (and was able to include a minimum of 66-2/3% of the shares of Warrant Shares requested by it to be included in such registration) pursuant to Section 3 hereof. The Company may postpone for up to six months the filing or the effectiveness of a registration statement for a Demand Registration if the Company reasonably believes that such Demand Registration might reasonably be expected to have an adverse effect on any proposal or plan by the Company to engage in any acquisition of assets (other than in the ordinary course of business) or any merger, consolidation, tender offer or similar transaction; provided, however, that in such event, the holders of the Warrant Shares initiating the request for such Demand Registration shall be entitled to withdraw such request and, if such request is withdrawn, such Demand Registration shall not count as one of the permitted Demand Registrations. If the Company elects to postpone the filing or effectiveness of a Demand Registration, it shall promptly notify each member of the Lender Group. In any event, the Company shall pay all Registration Expenses in connection with any registration initiated as a Demand Registration.

(e) The holders of a majority of the Warrant Shares participating in any Demand Registration shall have the right to select the investment banker(s) and manager(s) to administer the offering, subject to the Company's approval, which shall not be unreasonably withheld.

3. Piggyback Registrations. (a) Whenever the Company proposes to register any of its equity securities under the Securities Act (other than pursuant to a Demand Registration) and the registration form to be used may be used for the registration of Warrant Shares (a "Piggyback Registration"), the Company shall give prompt written notice to all holders of Warrant Shares of its intention to effect such a registration and shall include in such registration all Warrant Shares with respect to which the Company has received written requests for inclusion therein within 30 days after the receipt of the Company's notice.

(b) The Registration Expenses of the holders of Warrant Shares shall be paid by such holders in all Piggyback Registrations.

(c) If a Piggyback Registration is an underwritten primary registration on behalf of the Company, and the managing underwriters advise the Company in writing that in their judgment the number of securities requested to be included in such registration must be limited in order to effect an orderly public distribution, the Company shall include in such registration (i) first, the securities the Company proposes to sell, (ii) second, the Warrant Shares requested to be included in such registration, pro rata among the holders of such securities on the basis of the number of shares initially proposed to be registered by such holders, and (iii) third, any other securities requested to be included in such registration.

(d) If a Piggyback Registration is an underwritten secondary registration on behalf of holders of the Company's securities other than the holders of the Warrant Shares, and the managing underwriters advise the Company in writing that in their judgment the number of securities requested to be included in such registration must be limited in order to effect an orderly public distribution, the Company shall include in such registration (i) first, the securities requested to be included therein by the holders requesting such registration (ii) second, the Warrant Shares requested to be included in such registration, pro rata among the holders of such securities on the basis of the number of shares initially proposed to registered by such holders, and (iii) third, any other securities requested to be included in such registration.

4. Holdback Agreements. (a) Each holder of Warrant Shares agrees not to effect any public sale or distribution of the Warrant Shares owned by such holder, including, without limitation, sales pursuant to Rule 144 (or any similar rule then in effect), during the 10 days prior to and the 90 days beginning on the effective date of any underwritten Demand Registration or any underwritten Piggyback Registration in which Warrant Shares owned by such holder, are included (except as part of such underwritten registration) unless the underwriters managing the registered public offering otherwise agree.

(b) The Company agrees not to effect any public sale or distribution of its equity securities, or any securities convertible into or exchangeable or exercisable for such securities, during the 10 days prior to and during the 90 days beginning on the effective date of any underwritten Demand Registration or any underwritten Piggyback Registration (except as part of such underwritten registration or pursuant to registrations on Form S-8 or any successor form) unless the underwriters managing the registered public offering otherwise agree.

5. Registration Procedures. Whenever the holders of the Warrant Shares have requested that any Warrant Shares be registered pursuant to this Agreement, the Company shall use its best efforts to effect the registration of such Warrant Shares in accordance with the intended method of disposition thereof, and pursuant thereto the Company shall as expeditiously as possible:

(a) prepare and file with the Securities and Exchange Commission a registration statement with respect to such Warrant Shares and use its best efforts to cause such registration statement to become effective (provided that before filing a registration statement or prospectus or any amendments or supplements thereto, the Company will furnish to the counsel selected by the holders of a majority of the Warrant Shares requesting such registration statement copies of all documents proposed to be filed, which documents will be subject to the review of such counsel);

(b) prepare and file with the Securities and Exchange Commission such amendments and supplements to such registration statement and the prospectus used in connection therewith as may be necessary to keep such registration statement effective for a period of not less than 90 days and comply with the provisions of the Securities Act with respect to the disposition of all securities covered by such registration statement during such period in accordance with the intended methods of disposition by the sellers thereof set forth in such registration statement;

(c) furnish to each seller of Warrant Shares such number of copies of such registration statement, each amendment and supplement thereto, the prospectus included in such registration statement (including each preliminary prospectus) and such other documents as such seller may reasonably request in order to facilitate the disposition of the Warrant Shares owned by such seller;

(d) use its best efforts to register or qualify such Warrant Shares under such other securities or blue sky laws of such jurisdictions as any seller reasonably requests and do any and all other acts and things which may be reasonably necessary or advisable to enable such seller to consummate the disposition in such jurisdictions of the Warrant Shares owned by such seller (provided that the Company will not be required to (i) qualify generally to do business in any jurisdiction where it would not otherwise be required to qualify but for this subparagraph (d), (ii) subject itself to taxation in any such jurisdiction or (iii) consent to general service of process in any such jurisdiction);

(e) notify each seller of such Warrant Shares at any time when a prospectus relating thereto is required to be delivered under the Securities Act, of the occurrence of any event as a result of which the prospectus included in such registration statement contains an untrue statement of a material fact or omits any fact necessary to make the statements therein not misleading, and shall prepare in sufficient quantities a supplement or amendment to such prospectus so that, as thereafter delivered to the purchasers of such Warrant Shares such prospectus shall not contain an untrue statement of a material fact or omit to state any fact necessary to make the statements therein not misleading;

(f) use its best efforts to cause all such Warrant Shares to be listed on each securities exchange on which similar securities issued by the Company are then listed, and provide a transfer agent and registrar for such securities not later than the effective date of the applicable registration statement;

(g) in the case of an underwritten offering, enter into such customary agreements (including underwriting agreements in customary form) and take all such other actions as the holders of a majority of the Warrant Shares being sold or the underwriters, reasonably request in order to expedite or facilitate the disposition of such Warrant Shares (including, without limitation, effecting a stock split or a combination of shares);

(h) make available for inspection by any seller of Warrant Shares, any underwriter participating in any disposition pursuant to such registration statement, and any attorney, accountant or other agent retained by any such seller or underwriter, all financial and other records, pertinent corporate documents and properties of the Company, and cause the Company's officers, directors, employees and independent accountants to supply all information reasonably requested by any such seller, underwriter, attorney, accountant or agent in connection with such registration statement; and

(i) use its best efforts to obtain an appropriate opinion from the Company's counsel and a comfort letter from the Company's independent public accountants in customary form and covering such matters of the type customarily covered by opinions of Company counsel and comfort letters in similar registrations as the holders of a majority of the Warrant Shares

being sold reasonably request (provided that such holders constitute the holders of a majority of the securities covered by such registration agreement).

If any such registration statement refers to any holder by name or otherwise as the holder of any securities of the Company, such holder shall have the right to require (i) the insertion therein of language, in form and substance reasonably satisfactory to such holder, to the effect that the holding by such holder of such securities is not to be construed as a recommendation of such holder of the investment quality of the Company's securities covered thereby and that such holding does not imply that such holder will assist in meeting any future financial requirements of the Company, or (ii) in the event that such reference to such holder by name or otherwise is not required by the Securities Act or any similar Federal statute then in force, the deletion of the reference to such holder.

6. Registration Expenses. (a) All expenses incident to the Company's performance of or compliance with this Agreement, including without limitation, all registration and filing fees, National Association of Securities Dealers, Inc. fees and expenses of compliance with securities or blue sky laws, printing expenses, messenger and delivery expenses, and fees and disbursements of counsel for the Company, all independent certified public accountants, and underwriters (excluding discounts and commissions) (all such expenses being herein called "Registration Expenses"), shall be borne as provided in this Agreement, except that the Company shall, in any event, pay its internal expenses (including, without limitation, all salaries and expenses of its officers and employees performing legal or accounting duties), the expense of any annual audit or quarterly review, the expense of any liability insurance and the expenses and fees for listing the securities to be registered on each securities exchange on which similar securities issued by the Company are then listed.

(b) In connection with each Registration initiated as a Demand Registration, the Company shall reimburse the holders of the Warrant Shares covered by such registration for the reasonable fees and disbursements of one law firm chosen by the holders of a majority of the Warrant Shares included in such registration.

(c) To the extent Registration Expenses are not required to be paid by the Company, each holder of securities included in any registration hereunder shall pay the Registration Expenses allocable to the registration of such holder's securities so included, and any Registration Expenses not so allocable shall be borne by all sellers of securities included in such registration in proportion to the aggregate selling price of the securities to be so registered.

7. Indemnification. (a) The Company agrees to indemnify, to the extent permitted by law, each holder of Warrant Shares, its officers and directors and each Person who controls such holder (within the meaning of the Securities Act), against all losses, claims, damages, liabilities and expenses caused by, resulting from, arising out of or based upon any untrue or alleged untrue statement of material fact contained in any registration statement, prospectus or preliminary prospectus or any amendment thereof or supplement thereto or any omission or alleged omission of a material fact required to be stated therein or necessary to make the statements therein not misleading, except insofar as the same are caused by, resulting from, arising out of or based upon or contained in any information furnished in writing to the Company by such holder expressly for use therein or by such holder's failure to deliver a copy of the registration statement or prospectus or any amendments or supplements thereto after the Company has furnished such holder with a sufficient number of copies of the same. In connection with an underwritten offering, the Company shall indemnify such underwriters, their officers and directors and each Person who controls such underwriters (within the meaning of the Securities Act) to the same extent as provided above with respect to the indemnification of the holders of Warrant Shares.

(b) In connection with any registration statement in which a holder of Warrant Shares is participating, each such holder shall furnish to the Company in writing such information and affidavits as the Company reasonably requests for use in connection with any such registration statement or prospectus and, to the extent permitted by law, shall indemnify each other holder of Warrant Shares, the Company, its directors and officers and each person who controls the Company (within the meaning of the Securities Act) against any losses, claims, damages, liabilities and expenses caused by, resulting from, arising out of or based upon any untrue or alleged untrue statement of material fact contained in the registration statement, prospectus or preliminary prospectus or any amendment thereof or supplement thereto or any omission or alleged omission of a material fact required to be stated therein or necessary to make the statements therein not misleading, but only to the extent that such untrue statement or

omission is contained in any information or affidavit so furnished in writing by such holder expressly for use in the registration statement; provided, however, that the obligation to indemnify shall be several, not joint and several, among such holders of Warrant Shares and the liability of each such holder of Warrant Shares, shall be in proportion to and limited to the net amount received by such holder from the sale of Warrant Shares pursuant to such registration statement.

(c) Any person entitled to indemnification hereunder shall (i) give prompt written notice to the indemnifying party of any claim with respect to which it seeks indemnification and (ii) unless in such indemnified party's reasonable judgment a conflict of interest between such indemnified and indemnifying parties may exist with respect to such claim, permit such indemnifying party to assume the defense of such claim with counsel reasonably satisfactory to the indemnified party. If such defense is assumed, the indemnifying party shall not be subject to any liability for any settlement made by the indemnified party without its consent (but such consent will not be unreasonably withheld). An indemnifying party who is not entitled to, or elects not to, assume the defense of a claim shall not be obligated to pay the fees and expenses of more than one counsel for all parties indemnified by such indemnifying party with respect to such claim, unless in the reasonable judgment of any indemnified party a conflict of interest may exist between such indemnified party and any other of such indemnified parties with respect to such claim. Failure to give prompt written notice shall not release the indemnifying party from its obligations hereunder.

(d) To the extent permitted by law, the indemnification provided for under this Agreement shall remain in full force and effect regardless of any investigation made by or on behalf of the indemnified party or any officer, director or controlling person of such indemnified party and shall survive the transfer of securities.

(e) If the indemnification provided for in or pursuant to this Section 7 is due in accordance with the terms thereof, but is for any reason unavailable or unenforceable or insufficient in respect of any losses, claims, damages, liabilities or expenses referred to therein, then each applicable indemnifying party, in lieu of indemnifying such indemnified party, shall contribute to the amount paid or payable by such indemnified person as a result of such losses, claims, damages, liabilities or expenses in such proportion as is appropriate to reflect the relative fault of the indemnifying party on the one hand and of the indemnified party on the other in connection with the statements or omissions which resulted in such losses, claims, damages, liabilities or expenses as well as any other relevant equitable considerations. The relative fault of the indemnifying party on the one hand and of the indemnified person on the other shall be determined by reference to, among other things, whether the untrue or alleged untrue statement of a material fact or the omission or alleged omission to state a material fact relates to information supplied by the indemnifying party or by the indemnified party, by such party's relative intent, knowledge, access to information and opportunity to correct or prevent such statement, or omission. In no event shall the liability of any selling holder of Warrant Shares be greater in amount than the amount of proceeds received by such holder upon such sale.

8. Participation in Underwritten Registrations. No Lender may participate in any registration hereunder which is underwritten unless such Lender (a) agrees to sell such Lender's securities on the basis provided in any underwriting arrangements approved by the Person or Persons entitled hereunder to approve such arrangements and (b) completes and executes all questionnaires, powers of attorney, indemnities, underwriting agreements and other documents required under the terms of such underwriting arrangements.

9. Miscellaneous. (a) Except as otherwise provided herein, the provisions of this Agreement may be amended only with the written consent of the Company and the holders of 66-2/3% of the Warrant Shares.

(b) All covenants and agreements in this Agreement by or on behalf of any of the parties hereto shall bind and inure to the benefit of their respective successors and assigns whether so expressed or not. Each successor and assign shall agree to be bound by the terms hereof as if originally a party hereto. In addition, whether or not any express assignment has been made, the provisions of this Agreement which are for the benefit of purchasers or holders of the Warrant Shares are also for the benefit of, and enforceable by, any subsequent holder of such Warrant Shares, provided that each such transferee shall agree in writing to be bound by the terms and conditions of this Agreement.

(c) Whenever possible, each provision of this Agreement shall be interpreted in such manner as to be effective and valid under applicable law, but if any provision of this Agreement is held to be prohibited by or

invalid under applicable law, such provision will be ineffective only to the extent of such prohibition or invalidity, without invalidating the remainder of such provision or this Agreement.

(d) This Agreement may be executed simultaneously in two or more counterparts, each of which shall constitute an original, but all of which taken together shall constitute one and the same Agreement.

(e) The headings of this Agreement are inserted for convenience only and do not constitute a part of this Agreement.

(f) This Agreement shall be governed by the law of the State of New York.

(g) All notices provided for herein shall be given or made by certified mail or hand delivery, mailed or delivered to the intended recipient at the "Address of Notices" specified below its name on the signature pages hereof; or as to any party, at such other address as shall be designated by such party in a notice to each other party. Except as otherwise provided in this Agreement, all such communications shall be deemed to have been duly given when mailed or personally delivered.

(h) The Company will not hereafter enter into any agreement with respect to its securities which is inconsistent with the rights granted under this Agreement to the holders of Warrant Shares.

(i) Any person having rights under any provisions of this Agreement will be entitled to enforce such rights specifically, to recover damages caused by reason of any breach of any provision of this Agreement and to exercise all other rights granted by law.

(j) In any action or proceeding brought to enforce any provision of this Agreement, or where any provision of such Agreement is validly asserted as a defense, the successfuly party shall receive attorneys fees in addition to any other available remedy.

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first written above.

GCA CORPORATION

By
---
7 Shattuck Road
Andover, Massachusetts 01810
Attention: General Counsel

THE BANK OF NEW ENGLAND, N.A.

By
---
28 State Street
Boston, Massachusetts 02109
Attn: Cynthia Sackett
Assistant Vice President

BARCLAYS BANK PLC (formerly known as
"Barclays Bank International Limited")

By
---
420 Lexington Avenue
New York, New York
Attn: Advance Department

MANUFACTURERS HANOVER TRUST COMPANY

By
---
270 Park Avenue
New York, New York 10017
Attn: Gregory Harbaugh
Assistant Secretary

MANUFACTURERS HANOVER LEASING CORPORATION

By
  ----
270 Park Avenue, 29th Floor
New York, New York 10017
Attn: Robert Michael
Vice President

MELLON BANK, N.A.

By

One Mellon Bank Center, Room 4321
Pittsburgh, Pennsylvania 15258
Attn: Robert W. Goode
Senior Vice President

TEACHERS INSURANCE AND ANNUITY
ASSOCIATION OF AMERICA

By
  ----
730 Third Avenue
New York, New York 10017
Attn: Securities Division

GENERAL AMERICAN LIFE INSURANCE COMPANY

By

P.O. Box 396
St. Louis, Missouri 63166

HOME LIFE INSURANCE COMPANY

By
  ----
253 Broadway
New York, New York 10007
Attn: Securities Department

THE PENN MUTUAL LIFE INSURANCE COMPANY

By
  ----
530 Walnut Street
Philadelphia, Pennsylvania 19172
Attn: Securities Department

THE UNION CENTRAL LIFE INSURANCE COMPANY

By

P.O. Box 179
Cincinnati, Ohio 45201

THE UNION LABOR LIFE INSURANCE COMPANY

By
  ----
111 Massachusetts Ave., N.W.
Washington, D.C. 20001
Attn: Barbara Riley

PAN AMERICAN LIFE INSURANCE COMPANY

By
  ----
601 Poybras Street
Pan American Life Center
New Orleans, Louisiana 70130
Attn: 28th Floor Investments

BERKSHIRE LIFE INSURANCE COMPANY

By
  ----

700 South Street
Pittsfield, Massachusetts 01201
Attn: Securities Department

Exhibit 4.6

GCA CORPORATION

REGISTRATION AGREEMENT

Registration Agreement, dated as of September 1, 1987, among GCA Corporation, a Delaware corporation (the "Company"), and Carl Zeiss, Inc. ("Zeiss"). Terms not otherwise defined herein shall have the meaning ascribed to them in the Warrant Agreement.

WITNESSETH

WHEREAS, the Company and Zeiss are parties to that certain Warrant Agreement of even date herewith (the "Warrant Agreement"), pursuant to which the Company has issued to Zeiss a warrant (the "Warrant") to purchase 500,000 shares of common stock, $.01 par value per share, of the Company (the "Common Stock"); and

WHEREAS, the Warrant Agreement provides that Zeiss and subsequent holders of the Warrant or portions thereof outstanding and unexercised from time to time shall have certain registration rights with respect to the Warrant Shares issuable pursuant to the exercise of the Warrant;

NOW, THEREFORE, in consideration of the premises and of the mutual covenants hereinafter set forth, the Company and Zeiss agree as follows:

1. Defined Terms. Capitalized terms used in this Agreement, unless separately defined herein, shall have the meanings ascribed to such terms in the Warrant Agreement.

2. Demand Registrations. (a) At any time after the date hereof, the holder of the Warrant representing the right to purchase at least 200,000 shares of Common Stock of the Company or the holder of at least 200,000 Warrant Shares (equitably adjusted to reflect stock splits, stock dividends, combinations or similar events and adjustments pursuant to Section 4 of the Warrant) may request registration under the Securities Act of 1933, as amended (the "Securities Act"), of all or part of their Warrant Shares on Form S-1 or any other form available for the registration of the Warrant Shares ("Demand Registrations"), by written notice to the Company of such request accompanied by the simultaneous exercise of the Warrant to the extent of not less than Twenty Thousand (20,000) shares of Common Stock of the Company, $.01 Par Value, less the number of previously exercised shares which have not been registered. Within 10 days after receipt of any such request, the Company shall give written notice of such request to all other holders of the Warrant and of the Warrant Shares and shall, subject to the provisions of Section 2(c) hereof, include in such registration all Warrant Shares with respect to which the Company has received written requests for inclusion therein within 30 days after the receipt of the Company's notice.

(b) Subject to the provisions of Section 2(a), the Company shall pay all Registration Expenses (as defined in Section 6 hereof) in connection with each such registration. The Company shall pay all Registration Expenses in connection with any registration initiated as a Demand Registration, whether or not consummated.

(c) In the event that the managing underwriters of the requested Demand Registration advise the Company in writing that in their judgment in order to effect an orderly public distribution the number of Warrant Shares proposed to be included in any such Demand Registration must be limited, the Company shall include in such registration only the number of Warrant Shares which, in the opinion of such underwriters, can be sold in an orderly public distribution, such limitation to be imposed pro rata among the holders of the Warrant or of the Warrant Shares, as the case may be, who are participating in such registration on the basis of the amount of such securities initially proposed to be registered by such holder.

(d) The Company shall not be obligated to effect any Demand Registration within six months after the effective date of a previous Demand Registration or a previous registration under which each holder of Warrant Shares was given piggyback rights (and was able to include a minimum of 66-2/3% of the shares of Warrant Shares requested by it to be included in such registration) pursuant to Section 3 hereof. The Company may postpone for up to six months the filing or the effectiveness of a registration statement for a Demand Registration if the Company reasonably believes that such Demand Registration might reasonably be expected to have an adverse effect on any proposal or plan by the Company to engage in any acquisition of assets (other than in the ordinary course of business) or

any merger, consolidation, tender offer or similar transaction. If the Company elects to postpone the filing or effectiveness of a Demand Registration, it shall promptly notify each holder of the Warrant and of Warrant Shares.

(e) The holders of a majority of the Warrant Shares participating in any Demand Registration shall have the right to select the investment banker(s) and manager(s) to administer the offering, subject to the Company's approval, which shall not be unreasonably withheld.

3. Piggyback Registrations. (a) Whenever the Company proposes to register any of its equity securities under the Securities Act (other than pursuant to a Demand Registration) and the registration form to be used may be used for the registration of the Warrant Shares (a "Piggyback Registration"), the Company shall give prompt written notice to all holders of the Warrant and of Warrant Shares of its intention to effect such a registration and shall include in such registration all Warrant Shares with respect to which the Company has received written requests for inclusion therein within 30 days after the receipt of the Company's notice.

(b) The Registration Expenses of the holders of Warrant Shares shall be paid by such holders in all Piggyback Registrations.

(c) If a Piggyback Registration is an underwritten primary registration on behalf of the Company, and the managing underwriters advise the Company in writing that in their judgment the number of securities requested to be included in such registration must be limited in order to effect an orderly public distribution, the Company shall include in such registration (i) first, the securities the Company proposes to sell, (ii) second, the Warrant Shares requested to be included in such registration, pro rata among the holders of such securities on the basis of the numbers of shares initially proposed to be registered by such holders, and (iii) third, any other securities requested to be included in such registration.

(d) If a Piggyback Registration is an underwritten secondary registration on behalf of holders of the Company's securities other than the holders of the Warrant Shares, and the managing underwriters advise the Company in writing that in their judgment the number of securities requested to be included in such registration must be limited in order to effect an orderly public distribution, the Company shall include in such registration (i) first, the securities requested to be included therein by the holders requesting such registration (ii) second, the Warrant Shares requested to be included in such registration, pro rata among the holders of such securities on the basis of the number of shares initially proposed to registered by such holders, and (iii) third, any other securities requested to be included in such registration.

4. Holdback Agreements. (a) Each holder of Warrant Shares agrees not to effect any public sale or distribution of the Warrant Shares owned by such holder, including, without limitation, sales pursuant to Rule 144 (or any similar rule then in effect), during the 10 days prior to, and the 90 days beginning on, the effective date of any underwritten Demand Registration or any underwritten Piggyback Registration in which Warrant Shares owned by such holder are included (except as part of such underwritten registration) unless the underwriters managing the registered public offering otherwise agree.

(b) The Company agrees not to effect any public sale or distribution of its equity securities, or any securities convertible into or exchangeable or exercisable for such securities, during the 10 days prior to, and during the 90 days beginning on, the effective date of any underwritten Demand Registration or any underwritten Piggyback Registration (except as part of such underwritten registration or pursuant to registrations on Form S-8 or any successor form) unless the underwriters managing the registered public offering otherwise agree.

5. Registration Procedures. Whenever the holders of the Warrant or of the Warrant Shares have requested that any Warrant Shares be registered pursuant to this Agreement, the Company shall use its best efforts to effect the registration of such Warrant Shares in accordance with the intended method of disposition thereof, and pursuant thereto the Company shall as expeditiously as possible:

(a) prepare and file with the Securities and Exchange Commission a registration statement with respect to such Warrant Shares and use its best efforts to cause such registration statement to become effective (provided that before filing a registration statement or prospectus or any amendments or supplements thereto, the Company will furnish to the counsel selected by the holders of a majority of the Warrant Shares requesting such registration statement copies of all documents proposed to be filed, which documents will be subject to the review of such counsel);

(b) prepare and file with the Securities and Exchange Commission such amendments and supplements to such registration statement and the prospectus used in connection therewith as may be necessary to keep such registration statement effective for a period of not less than 180 days and comply with the provisions of the Securities Act with respect to the disposition of all securities covered by such registration statement during such period in accordance with the intended methods of disposition by the sellers thereof as set forth in such registration statement;

(c) furnish to each seller of Warrant Shares such number of copies of such registration statement, each amendment and supplement thereto, the prospectus included in such registration statement (including each preliminary prospectus) and such other documents as such seller may reasonably request in order to facilitate the disposition of the Warrant Shares owned by such seller;

(d) use its best efforts to register or qualify such Warrant Shares under such other securities or blue sky laws of such jurisdictions as any seller reasonably requests and do any and all other acts and things which may be reasonably necessary or advisable to enable such seller to consummate the disposition in such jurisdictions of the Warrant Shares owned by such seller (provided that the Company will not be required to (i) qualify generally to do business in any jurisdiction where it would not otherwise be required to qualify but for this subparagraph (d), (ii) subject itself to taxation in any such jurisdiction or (iii) consent to general service of process in any such jurisdiction);

(e) notify each seller of such Warrant Shares at any time when a prospectus relating thereto is required to be delivered under the Securities Act, of the occurrence of any event as a result of which the prospectus included in such registration statement contains an untrue statement of a material fact or omits any fact necessary to make the statements therein not misleading, and shall prepare in sufficient quantities a supplement or amendment to such prospectus so that, as thereafter delivered to the purchaser of such Warrant Shares such prospectus shall not contain an untrue statement of a material fact or omit to state any fact necessary to make the statements therein not misleading;

(f) use its best efforts to cause all such Warrant Shares to be listed on each securities exchange on which similar securities issued by the Company are then listed, and provide a transfer agent and registrar for such securities not later than the effective date of the applicable registration statement;

(g) in the case of an underwritten offering, enter into such customary agreements (including underwriting agreements in customary form) and take all such other actions as the holders of a majority of the Warrant Shares being sold or the underwriters, reasonably request in order to expedite or facilitate the disposition of such Warrant Shares (including, without limitation, effecting a stock split or a combination of shares);

(h) make available for inspection by any seller of Warrant Shares, any underwriter participating in any disposition pursuant to such registration statement, and any attorney, accountant or other agent retained by any such seller or underwriter, all financial and other records, pertinent corporate documents and properties of the Company, and cause the Company's officers, directors, employees and independent accountants to supply all information reasonably requested by any such seller, underwriter, attorney, accountant or agent in connection with such registration statement; and

(i) use its best efforts to obtain an appropriate opinion from the Company's counsel and a comfort letter from the Company's independent public accountants in customary from and covering such matters of the type customarily covered by opinions of Company counsel and comfort letters in similar registrations as the holders of a majority of the Warrant Shares being sold reasonably request (provided that such holders constitute the holders of a majority of the securities covered by such registration agreement).

If any such registration statement refers to any holder by name or otherwise as the holder of any securities of the Company, such holder shall have the right to require (i) the insertion therein of language, in form and substance reasonably satisfactory to such holder, to the effect that the holding by such holder of such securities is not to be construed as a recommendation of such holder of the investment quality of the Company's securities covered thereby and that such holding does not imply that such holder will assist in meeting any future financial requirements of the Company, or (ii) in the event that such reference to such holder by name or otherwise is not required by the Securities Act or any similar Federal statute then in force, the deletion of the reference to such

holder.

6. Registration Expenses. (a) All expenses incident to the Company's performance of or compliance with this Agreement, including without limitation, all registration and filing and listing fees, National Association of Securities Dealers, Inc. fees and expenses of compliance with securities or blue sky laws, printing expenses, messenger and delivery expenses, and fees and disbursements of counsel for the Company, all independent certified public accountants, and underwriters (excluding discounts and commissions) (all such expenses being herein called "Registration Expenses"), shall be borne as provided in this Agreement, except that the Company shall, in any event, pay its internal expenses (including, without limitation, all salaries and expenses of its officers and employees performing legal or accounting duties), the expense of any annual audit or quarterly review, the expense of any liability insurance and the expenses and fees for listing the securities to be registered on each securities exchange on which similar securities issued by the Company are then listed.

(b) In connection with each Registration initiated as a Demand Registration, the Company shall reimburse the holders of the Warrant Shares covered by such registration for the reasonable fees and disbursements of one law firm chosen by the holders of a majority of the Warrant Shares included in such registration.

(c) To the extent Registration Expenses are not required to be paid by the Company, each holder of securities included in any registration hereunder shall pay the Registration Expense allocated to the registration of such holder's securities so included, and any Registration Expenses not so allocable shall be borne by all sellers of securities included in such registration in proportion to the aggregate selling price of the securities to be so registered.

7. Indemnification. (a) The Company agrees to indemnify, to the extent permitted by law, each holder of the Warrant and of Warrant Shares, its officers and directors and each Person who controls such holder (within the meaning of the Securities Act), against all losses, claims, damages, liabilities and expenses caused by, resulting from, arising out of or based upon any untrue or alleged untrue statement of material fact contained in any registration statement, prospectus or preliminary prospectus or any amendment thereof or supplement thereto or any omission or alleged omission of a material fact required to be stated therein or necessary to make the statements therein not misleading, except insofar as the same are caused by, resulting from, arising out of or based upon or contained in any information furnished in writing to the Company by such holder expressly for use therein or by such holder's failure to deliver a copy of the registration statement or prospectus or any amendments or supplements thereto after the Company has furnished such holder with a sufficient number of copies of the same. In connection with an underwritten offering, the Company shall indemnify such underwriters, their officers and directors and each Person who controls such underwriters (within the meaning of the Securities Act) to the same extent as provided above with respect to the indemnification of the holders of the Warrant and of Warrant Shares.

(b) In connection with any registration settlement in which a holder of a Warrant or of Warrant Shares is participating, each such holder shall furnish to the Company in writing such information and affidavits as the Company reasonably requests for use in connection with any such registration statement or prospectus and, to the extent permitted by law, shall indemnify each other holder of a Warrant and of Warrant Shares, the Company, its directors and officers and each person who controls the Company (within the meaning of the Securities Act) against any losses, claims, damages, liabilities and expenses caused by, resulting from, arising out of or based upon any untrue or alleged untrue statement of material fact contained in the registration statement, prospectus or preliminary prospectus or any amendment thereof or supplement thereto or any omission or alleged omission of a material fact required to be stated therein or necessary to make the statements therein not misleading, but only to the extent that such untrue statement or omission is contained in any information or affidavit so furnished in writing by such holder expressly for use in the registration statement; provided, however, that the obligation to indemnify shall be several, not joint and several, among such holders of a Warrant and of Warrant Shares and the liability of each such holder of a Warrant and of Warrant Shares, shall be in proportion to and limited to the net amount received by such holder from the sale of Warrant Shares pursuant to such registration statement.

(c) Any person entitled to indemnification hereunder shall (i) give prompt written notice to the indemnifying party of any claim with respect to which it seeks indemnification and (ii) unless in such indemnified party's reasonable judgment a conflict of interest between such indemnified and indemnifying parties may exist with respect to such claim,

permit such indemnifying party to assume the defense of such claim with counsel reasonably satisfactory to the indemnified party. If such defense is assumed, the indemnifying party shall not be subject to any liability for any settlement made by the indemnified party without its consent (but such consent will not be unreasonably withheld). An indemnifying party who is not entitled to, or elects not to, assume the defense of a claim shall not be obligated to pay the fees and expenses of more than one counsel for all parties indemnified by such indemnifying party with respect to such claim, unless in the reasonable judgment of any indemnified party a conflict of interest may exist between such indemnified party and any other of such indemnified parties with respect to such claim. Failure to give prompt written notice shall not release the indemnifying party from its obligations hereunder.

(d) To the extent permitted by law, the indemnification provided for under this Agreement shall remain in full force and effect regardless of any investigation made by or on behalf of the indemnified party or any officer, director or controlling person of such indemnified party and shall survive the transfer of securities.

(e) If the indemnification provided for in or pursuant to this Section 7 is due in accordance with the terms thereof, but is for any reason unavailable or unenforceable or insufficient in respect of any losses, claims, damages, liabilities or expenses referred to therein, then each applicable indemnifying party, in lieu of indemnifying such indemnified party, shall contribute to the amount paid or payable by such indemnified person as a result of such losses, claims, damages, liabilities or expenses in such proportion as is appropriate to reflect the relative fault of the indemnifying party on the one hand and of the indemnified party on the other in connection with the statements or omissions which resulted in such losses, claims, damages, liabilities or expenses as well as any other relevant equitable considerations. The relative fault of the indemnifying party on the one hand and of the indemnified person on the other shall be determined by reference to, among other things, whether the untrue or alleged untrue statement of a material fact or the omission or alleged omission to state a material fact relates to information supplied by the indemnifying party or by the indemnified party, by such party's relative intent, knowledge, access to information and opportunity to correct or prevent such statement, or omission. In no event shall the liability of any selling holder of Warrant Shares be greater in amount than the amount of proceeds received by such holder upon such sale.

8. Participation in Underwritten Registrations. No holder of Warrant Shares may participate in any registration hereunder which is underwritten unless such holder (a) agrees to sell such holder's securities on the basis provided in any underwriting arrangements approved by the Person or Persons entitled hereunder to approve such arrangements and (b) completes and executes all questionnaires, powers of attorney, indemnities, underwriting agreements and other documents require under the terms of such underwriting arrangements.

9. Miscellaneous. (a) Except as otherwise provided herein, the provisions of this Agreement may be amended only with the written consent of the Company and the holders of a Warrant to purchase at least 50% of the then unexercised Warrant Shares.

(b) All covenants and agreements in this Agreement by or on behalf of any of the parties hereto shall bind and inure to the benefit of their respective successors and assigns whether so expressed or not. Each successor and assign shall agree to be bound by the terms hereof as if originally a party hereto. In addition, whether or not any express assignment has been made, the provisions of this Agreement which are for the benefit of purchasers or holders of the Warrant Shares are also for the benefit of, and enforceable by, any subsequent holder of such Warrant Shares, provided that each such transferee shall agree in writing to by bound by the terms and conditions of this Agreement.

(c) Whenever possible, each provision of this Agreement shall be interpreted in such manner as to be effective and valid under applicable law, but if any provision of this Agreement is held to be prohibited by or invalid under applicable law, such provision will be ineffective only to the extent of such prohibition or invalidity, without invalidating the remainder of such provision of this Agreement.

(d) This Agreement may be executed simultaneously in two or more counterparts, each of which shall constitute an original, but all of which taken together shall constitute one and the same Agreement.

(e) The headings of this Agreement are inserted for convenience only and do not constitute a part of this Agreement.

(f) This Agreement shall be governed by the law of the State

of New York.

(g) All notices provided for herein shall be given or made by certified mail or hand delivery, mailed or delivered to the intended recipient at the address specified below its name on the signature page hereof; or as to any party, at such other address as shall be designated by such party in a notice to each other party. Except as otherwise provided in this Agreement, all such communications shall be deemed to have been duly given when mailed or personally delivered.

(h) The Company will not hereafter enter into any agreement with respect to its securities which is inconsistent with the rights granted under this Agreement to the holders of Warrant Shares.

(i) Any person having rights under any provisions this Agreement will be entitled to enforce such rights specifically, to recover damages caused by reason of any breach of any provision of this Agreement and to exercise all other rights granted by law.

(j) In any action of proceeding brought to enforce any provision of this Agreement, or where any provision of such Agreement is validly asserted as a defense, the successfully party shall receive attorneys fees in addition to any other available remedy.

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first written above.

GCA CORPORATION

By

(Name and Title)
7 Shattuck Road
Andover, Massachusetts 01810
Attention: General Counsel

CARL ZEISS, INC.

By

(Name and Title)
1 Zeiss Drive
Thornwood, New York 10549
Attention: Corporate Secretary

THE ISSUANCE OF THIS WARRANT AND ANY SHARES OF COMMON STOCK ISSUABLE UPON THE EXERCISE HEREOF HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED. ACCORDINGLY, NO TRANSFER OF THIS WARRANT OR ANY SHARES OF COMMON STOCK ISSUABLE OR ISSUED UPON THE EXERCISE HEREOF MAY BE MADE EXCEPT IN COMPLIANCE WITH SUCH STATUTE AND THE TERMS OF THE WARRANT AGREEMENT REFERRED TO BELOW, A COPY OF WHICH IS ON FILE AT THE OFFICE OF GCA CORPORATION.

Void After 4:00 P.M., Boston Time, on April 23, 2002

GCA CORPORATION WARRANT

Number _____ Warrant to Purchase _____ Shares of Common Stock

This is to certify that _____ , or registered assigns (the "Holder"), is entitled to purchase from GCA Corporation, a Delaware corporation (the "Company"), at an exercise price (the "Warrant Price") of _____,(1) at any time prior to 4:00 p.m. (Boston time) on April 23, 2002, _____ fully paid and non-assessable shares (after giving effect to the 1-for-50 reverse stock split (the "Reverse Split") of the Common Stock (as hereinafter defined) contemplated to occur on April 24, 1987) of the Company's common stock, par value $.01 per share (the "Common Stock"), subject to adjustment as hereinafter provided.

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(1). SUCH AMOUNT SHALL BE 150% OF THE BOOK VALUE PER SHARE OF THE COMPANY'S COMMON STOCK AS OF THE LAST DAY OF THE FISCAL MONTH IN WHICH THE CLOSING, AS DEFINED IN THAT CERTAIN RESTRUCTURING AGREEMENT, DATED AS OF DECEMBER 5, 1986, AMONG THE COMPANY, THE HALLWOOD GROUP INCORPORATED, AND THE LENDERS NAMED THEREIN, OCCURS.

1. This Warrant is one of a series of Warrants (the "Warrants"), for the purchase of an aggregate of 2,190,806 shares of Common Stock, subject to adjustment, issued by the Company pursuant to that certain Warrant Agreement, dated as of April 23, 1987, among the Company, The Hallwood Group Incorporated, a Delaware corporation, and the Lender Group referred to therein, a copy of which is on file at the office of the Company referred to below, and is subject to the terms of such Warrant Agreement, to all of which terms every Holder consents by acceptance hereof.

2. The rights represented by this Warrant may be exercised by the Holder hereof at any time or from time to time prior to 4:00 p.m. (Boston time) on April 23, 2002, as to the whole or any part of the shares of Common Stock covered hereby, by the surrender of this Warrant, together with (i) the Subscription Form attached hereto appropriately completed, and (ii) payment (in cash, by certified check or by wire transfer, in each case of immediately available funds) of the Warrant Price for the share or shares of Common Stock so purchased, to the Company at its office at 7 Shattuck Road, Andover, Massachusetts 01810 (or at such other office as the Company may designate by written notice to the holder hereof). Thereupon, this Warrant shall be deemed to have been exercised and the person exercising the same shall be deemed to have become a holder of record of the shares of Common Stock purchased hereunder for all purposes, and certificates for such shares of Common Stock so purchased shall be delivered to the purchaser within a reasonable time after this Warrant shall have been exercised as set forth hereinabove. If this Warrant shall be exercised in respect of only a part of the shares of Common Stock subject hereto, the Company shall deliver to the Holder a Warrant registered in the name of the Holder (or his designee) with respect to that number of shares of Common Stock in respect of which this Warrant shall not have been exercised.

3. No certificate for a fraction of a share of Common Stock will be issued. As to any fractions of a share of Common Stock that would otherwise be purchasable on exercise of a Warrant, the Company shall make payment in lieu thereof in an amount of cash equal to the current value of such fraction computed on the basis of the last reported sale price on the day upon which the exercise of the Warrant shall have taken place or, in case no such reported sale takes place on such day, the average of the last reported bid and asked prices on such day, in either case on the principal national securities exchange (which, for purposes hereof, shall be deemed to include the NASDAQ National Market System) on which the Common Stock is listed or admitted to trading, or if not listed or admitted to trading on any national securities exchange, the average mean of the bid and asked prices in the over-the-counter market as reported by the National Association of Securities Dealers Automated Quotation System, or if such

organization is not in existence, by an organization providing similar services.

4. Subject to the terms and conditions of the Warrant Agreement, this Warrant and any interest therein or in the shares of Common Stock issuable upon exercise thereof is transferable on the books of the Company at its office at 7 Shattuck Road, Andover, Massachusetts 01810 (or such other office as the Company may designate by written notice to the holder hereof), by the Holder hereof in person or by duly authorized attorney, upon surrender of this Warrant together with the Assignment Form attached hereto, duly executed, whereupon this Warrant (and any interest therein or in the shares of Common Stock issuable upon exercise hereof) shall be deemed to have been transferred and the transferee to have become the holder of record thereof. Promptly following such surrender, the Company shall issue a new Warrant (or certificate of shares) registered in the name of the transferee.

5. The rights of the Holder of this Warrant shall be subject to the following further terms and conditions:

(a) The Warrant Price and the number of shares of Common Stock purchasable pursuant to this Warrant shall be subject to adjustment from time to time as follows. In case the Company shall (i) declare a dividend or make a distribution on shares of its Common Stock payable in shares of Common Stock, or (ii) subdivide or reclassify its outstanding shares of Common Stock into a greater number of shares of Common Stock (a "stock split"), the Warrant Price shall be adjusted by multiplying it by a fraction, (A) the numerator of which shall be the number of shares of Common Stock outstanding immediately prior to such stock dividend or stock split, and (B) the denominator of which shall be the number of shares of Common Stock outstanding immediately following such stock dividend or stock split and the number of shares of Common Stock purchasable upon the exercise of this Warrant immediately prior thereto shall be multiplied by the inverse of such fraction. Conversely, in case of any combination, reclassification or consolidation (other than the Reverse Split) of the number of outstanding shares of Common Stock into a lesser number of shares, the Warrant Price shall be adjusted by multiplying it by a fraction, (x) the numerator of which shall be the number of shares of Common Stock outstanding immediately prior to such combination, reclassification or consolidation, and (y) the denominator of which shall be the number of shares of Common Stock outstanding immediately following such combination, reclassification or consolidation and the number of shares of Common Stock purchaseable upon the exercise of this Warrant immediately prior thereto shall be multiplied by the inverse of such fraction. Such adjustments shall be made successively whenever any event listed above shall occur.

(b) In case of any reclassification or change in the outstanding shares of Common Stock (other than a change in par value, or from par value to no par value, or from no par value to par value, or as a result of a subdivision or combination, but including any change of the shares of Common Stock into two or more classes or series of common stock), or in case of any consolidation of the Company with, or merger of the Company with or into, another Person (other than a consolidation or merger in which the Company is the continuing entity and which does not result in any reclassification or change in the outstanding shares of Common Stock), or in case of any conveyance or transfer to another Person of the property of the Company as an entirety or substantially as an entirety, the Company, or such successor purchasing Person, shall provide that the Holder of this Warrant shall have the right to obtain, upon the same terms and conditions, the kind and amount of shares and other securities, cash and property that would have been receivable by such Holder upon such reclassification, change, consolidation, merger, conveyance or transfer if the rights represented by such Warrant had been exercised to purchase Common Stock immediately prior thereto. Such other Person, which shall thereafter be deemed to be the Company for purposes of this Warrant, shall provide for adjustments which shall be as nearly equivalent as may be practicable to the adjustments provided for hereinabove.

(c) In case at any time the Company shall propose

(i) to declare any dividend or make any distribution on shares of Common Stock payable in shares of Common Stock or fix a record date for the making of any other distribution (other than a cash dividend) to all holders of shares of Common Stock; or

(ii) to fix a record date for the issuance of rights or warrants to all holders of its Common Stock entitling them to purchase any additional shares or beneficial interest of any class or any other rights or warrants; or

(iii) to consolidate or merge with or into any Person or

convey or transfer its properties and assets substantially as an entirety to any Person; or

(iv) to effect any reorganization, reclassification, liquidation, dissolution, or winding-up of the Company; then, in any one or more of such cases, the Company shall give 30 days prior written notice to the Holder of this Warrant of the date on which (A) the books of the Company shall close or a record shall be taken for such dividend on shares of Common Stock, distribution or offering of rights or warrants, or (B) such consolidation, merger, conveyance, transfer, reorganization, reclassification, liquidation, dissolution or winding-up shall take place, as the case may be.

(d) As used in this paragraph 5,

(i) "Common Stock" shall mean the Common Stock of the Company as constituted on the date hereof, and shares of any class or classes resulting from any reclassification thereof that have no preference in respect of dividends or amounts payable in the event of any voluntary or involuntary liquidation, dissolution or winding-up of the Company and which are not subject to redemption by the Company;

(ii) "Person" shall mean any individual, corporation, partnership, joint venture, association, joint-stock company, trust, unincorporated organization or government or any agency or political subdivision thereof.

(e) Except as otherwise provided herein, the Holder hereof shall not be entitled on account of holding this Warrant to any rights of a stockholder of the Company either at law or in equity, or to any notice of meetings of stockholders or of any other proceedings of the Company.

(f) The Holder of this Warrant shall, upon demand, disclose to the Company in writing such information as is readily available to the Holder with respect to direct, indirect, actual and/or constructive ownership of shares of Common Stock and/or Warrants as the Company may deem necessary to comply with the provisions of the Internal Revenue Code of 1986 (the "Code") or with the requirements of any other taxing authority. For the purpose of this subparagraph (f), "ownership" of shares of Common Stock shall be determined as provided in Section 544 of the Code or any successor provisions as then in effect and the number of shares of Common Stock owned shall include all shares of Common Stock that may then be acquired upon conversion, exchange or exercise of rights under other securities.

(g) Each Holder of this Warrant shall furnish the Company with the address to which all notices provided for herein to be given to such holder shall be sent. The Company shall be entitled for all purposes to consider the Person in whose name this Warrant is issued as the lawful owner of this Warrant and as entitled to exercise all his rights hereunder, and no other Person shall have any rights with respect thereto.

Dated: Apri1 23, 1987 GCA CORPORATION

By

ASSIGNMENT FORM TO BE EXECUTED
UPON TRANSFER OR WARRANT

FOR VALUE RECEIVED, _____ hereby sell(s), assign(s) and transfer(s) unto _____ _____ the right to purchase _____ shares of Common Stock covered by the within Warrant, and do hereby irrevocably constitute and appoint said Attorney, to transfer said right on the books of GCA Corporation, with full power of substitution in the premises.

Dated: ---

[ ]

By:

Title:

SUBSCRIPTION FORM TO BE EXECUTED
UPON EXERCISE OR WARRANT

The undersigned hereby exercises, according to the terms and conditions thereof, the right to purchase _____ shares of Common Stock evidenced by the within Warrant, and herewith makes payment of the purchase price in full.

Dated: ----------

[ ]

By: ---

Title: ---

THE ISSUANCE OF THIS WARRANT AND ANY SHARES OF COMMON STOCK ISSUABLE UPON THE EXERCISE HEREOF HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED. ACCORDINGLY, NO TRANSFER OF THIS WARRANT OR ANY SHARES OF COMMON STOCK ISSUABLE OR ISSUED UPON THE EXERCISE HEREOF MAY BE MADE EXCEPT IN COMPLIANCE WITH SUCH STATUTE AND THE TERMS OF THE WARRANT AGREEMENT REFERRED TO BELOW, A COPY OF WHICH IS ON FILE AT THE OFFICE OF GCA CORPORATION.

Void After 4:00 P.M., Boston Time, on September 1, 2002

GCA Corporation Warrant

Number -14- Warrant to Purchase 500,000 Shares of Common Stock

This is to certify that Carl Zeiss, Inc., or registered assigns (the "Holder"), is entitled to purchase from GCA Corporation, a Delaware corporation (the "Company"), at an exercise price (the "Warrant Price") of $12.32 per share, at any time prior to 4:00 p.m. (Boston time) on September 1, 2002, 500,000 fully paid and non-assessable shares of the Company's common stock, par value $.01 per share (the "Common Stock"), subject to adjustment as hereinafter provided.

1. The rights represented by this Warrant may be exercised by the Holder hereof at any time or from time to time prior to 4:00 p.m. (Boston time) on September 1, 2002, as to the whole or any part of the shares of Common Stock covered hereby, by the surrender of this Warrant, together with (i) the Subscription Form attached hereto appropriately completed, and (ii) payment (in cash, by certified check or by wire transfer, in each case of immediately available funds) of the Warrant Price for the share or shares of Common Stock so purchased, to the Company at its office at 7 Shattuck Road, Andover, Massachusetts 01810 (or at such other office as the Company may designate by written notice to the holder hereof). Thereupon, this Warrant shall be deemed to have been exercised and the person exercising the same shall be deemed to have become a holder of record of the shares of Common Stock purchased hereunder for all purposes, and certificates for such shares of Common Stock so purchased shall be delivered to the purchaser within a reasonable time after this Warrant shall have been exercised as set forth hereinabove. If this Warrant shall be exercised in respect of only a part of the shares of Common Stock subject hereto, the Company shall deliver to the Holder a Warrant registered in the name of the Holder (or his designee) with respect to that number of shares of Common Stock in respect of which this Warrant shall not have been exercised.

2. No certificate for a fraction of a share of Common Stock will be issued. As to any fractions of a share of Common Stock that would otherwise be purchasable on exercise of a Warrant, the Company shall make payment in lieu thereof in an amount of cash equal to the current value of such fraction computed on the basis of the last reported sale price on the day upon which the exercise of the Warrant shall have taken place or, in case no such reported sale takes place on such day, the average of the last reported bid and asked prices on such day, in either case on the principal national securities exchange (which, for purposes hereof, shall be deemed to include the NASDAQ National Market System) on which the Common Stock is listed or admitted to trading, or if not listed or admitted to trading on any national securities exchange, the average mean of the bid and asked prices in the over-the-counter market as reported by the National Association of Securities Dealers Automated Quotation System, or if such organization is not in existence, by an organization providing similar services.

3. Subject to the terms and conditions of the Warrant Agreement, this Warrant and any interest therein or in the shares of Common Stock issuable upon exercise thereof is transferable on the books of the Company at its offices at 7 Shattuck Road, Andover, Massachusetts 01810 (or such other office as the Company may designate by written notice to the holder hereof), by the Holder hereof in person or by duly authorized attorney, upon surrender of this Warrant together with the Assignment Form attached hereto, duly executed, whereupon this Warrant (and any interest therein or in the shares of Common Stock issuable upon exercise hereof) shall be deemed to have been transferred and the transferee to have become the holder of record thereof. Promptly following such surrender, the Company shall issue a new Warrant (or certificate of shares) registered in the name of the transferee.

4. The rights of the Holder of this Warrant shall be subject to the following further terms and conditions:

(a) The Warrant Price and the number of shares of Common Stock purchasable pursuant to this Warrant shall be subject to adjustment from to time as follows. In case the Company shall (i) declare a dividend or make a distribution on shares of its Common Stock payable in shares of Common Stock, or (ii) subdivide or reclassify its outstanding shares of Common Stock into a greater number of shares of Common Stock (a "stock split"), the Warrant Price shall be adjusted by multiplying it by a fraction, (A) the numerator of which shall be the number of shares of Common Stock outstanding immediately prior to such stock dividend or stock split, and (B) and the denominator of which shall be the number of shares of Common Stock outstanding immediately following such stock dividend or stock split and the number of shares of Common Stock purchasable upon the exercise of this Warrant immediately prior thereto shall be multiplied by the inverse of such fraction. Conversely, in case of any combination, reclassification or consolidation of the number of outstanding shares of Common Stock into a lesser number of shares, the Warrant Price shall be adjusted by multiplying it by a fraction, (x) the numerator of which shall be the number of shares of Common Stock outstanding immediately prior to such combination, reclassification or consolidation, and (y) the denominator of which shall be the number of shares of Common Stock outstanding immediately following such combination, reclassification or consolidation and the number of shares of Common Stock purchasable upon the exercise of this Warrant immediately prior thereto shall be multiplied by the inverse of such fraction. Such adjustments shall be made successively whenever any event listed above shall occur.

(b) in case of any reclassification or change in the outstanding shares of Common Stock (other than a change in par value, or from par value to no par value, or from no par value to par value, or as a result of a subdivision or combination, but including any change of the shares of Common Stock into two or more classes or series of common stock), or in case of any consolidation of the Company with, or merger of the Company with or into, another Person (other than a consolidation or merger in which the Company is the continuing entity and which does not result in any reclassification or change in the outstanding shares of Common Stock), or in case of any conveyance or transfer to another Person of the property of the Company as an entirety or substantially as an entirety, the Company, or such successor purchasing Person, shall provide that the Holder of this Warrant shall have the right to obtain, upon the same terms and conditions, the kind and amount of shares and other securities, cash and property that would have been receivable by such Holder upon such reclassification, change, consolidation, merger, conveyance or transfer if the rights represented by such Warrant had been exercised to purchase Common Stock immediately prior thereto. Such other Person, which shall thereafter be deemed to be the Company for purposes of this Warrant, shall provide for adjustments which shall be as nearly equivalent as may be practicable to the adjustments provided for hereinabove.

(c) In case at any time the Company shall propose

(i) to declare any dividend or make any distribution on shares of Common Stock payable in shares of Common Stock or fix a record date for the making of any other distribution (other than a cash dividend) to all holders of shares of Common Stock; or

(ii) to fix a record date for the issuance of rights or warrants to all holders of its Common Stock entitling them to purchase any additional shares or beneficial interest of any class or any other rights or warrants; or

(iii) to consolidate or merge with or into any Person or convey or transfer its properties and assets substantially as an entirety to any Person; or

(iv) to effect any reorganization, reclassification, liquidation, dissolution, or winding-up of the Company;

then, in any one or more of such cases, the Company shall give 30 days prior written notice to the Holder of this Warrant of the date on which (A) the books of the Company shall close or a record shall be taken for such dividend on shares of Common Stock, distribution or offering of rights or warrants, or (B) such consolidation, merger, conveyance, transfer, reorganization, reclassification, liquidation, dissolution or winding-up shall take place, as the case may be.

(d) As used in this paragraph 4,

(i) "Common Stock" shall mean the Common Stock of the Company as constituted on the date hereof, and shares of any class or classes resulting from any reclassification thereof that have no preference in respect of dividends or amounts payable in the event of any voluntary or

involuntary liquidation, dissolution or winding-up of the Company and which are not subject to redemption by the Company;

(ii) "Persons" shall mean any individual, corporation, partnership, joint venture, association, joint-stock company, trust, unincorporated organization or government or any agency or political subdivision thereof.

(e) Except as otherwise provided herein, the Holder hereof shall not be entitled on account of holding this Warrant to any rights of a stockholder of the Company either at law or in equity, or to any notice of meetings of stockholders or of any other proceedings of the Company.

(f) The Holder of this Warrant shall, upon demand, disclose to the Company in writing such information as is readily available to the Holder with respect to direct, indirect, actual and/or constructive ownership of shares of Common Stock and/or Warrants as the Company may deem necessary to comply with the provisions of the Internal Revenue Code of 1986 (the "Code") or with the requirements of any other taxing authority. For the purpose of this subparagraph (f), "ownership" of shares of Common Stock shall be determined as provided in Section 544 of the Code or any successor provisions as then in effect and the number of shares of Common Stock owned shall include all shares of Common Stock that may then be acquired upon conversion, exchange or exercise of rights under other securities.

(g) Each Holder of this Warrant shall furnish the Company with the address to which all notices provided for herein to be given to such holder shall be sent. The Company shall be entitled for all purposes to consider the Person in whose name this Warrant is issued as the lawful owner of this Warrant and is entitled to exercise all his rights hereunder, and no other Person shall have any rights with respect thereto.

Dated: September 1, 1987 GCA CORPORATION

By

(Name and Title)

ASSIGNMENT FORM TO BE EXECUTED
UPON TRANSFER OR WARRANT

FOR VALUE RECEIVED, _____ hereby sell(s), assign(s) and transfer(s) unto _____ _____ the right to purchase _____ shares of Common Stock covered by the within Warrant, and do hereby irrevocably constitute and appoint said Attorney, to transfer said right on the books of GCA Corporation, with full power of substitution in the premises.

Dated: _____

[ ]

By:

Title:

SUBSCRIPTION FORM TO BE EXECUTED
UPON EXERCISE OR WARRANT

The undersigned hereby exercises, according to the terms and conditions thereof, the right to purchase _____ shares of Common Stock evidenced by the within Warrant; and herewith makes payment of the purchase price in full.

Dated: ----------

[----------]

By: ----------

Title: ----------

212-859-8272
(FAX: 212-859-8589)

January 18, 2002

SPX Corporation
2300 One Wachovia Center
301 South College Street
Charlotte, NC 28202-6039

Ladies and Gentlemen:

We are acting as counsel to SPX Corporation, a Delaware corporation (the "Company"), in connection with the Registration Statement on Form S-3 (the "Registration Statement"), under the Securities Act of 1933, as amended (the "Securities Act") being filed with the Securities and Exchange Commission (the "Commission") relating to an issuance from time to time, pursuant to Rule 415 of the General Rules and Regulations of the Commission promulgated under the Securities Act, of up to 379,229 shares of common stock of the Company, par value $10.00 per share (the "Common Stock") which may be issued in connection with the exercise of two warrants issued by GCA Corporation ("GCA") in 1987. GCA was acquired by General Signal Corporation ("General Signal") in June 1988, and in 1998 General Signal was acquired by the Company. As a result of the Company's acquisition of General Signal, the warrants represent the right to purchase an aggregate of 379,229 shares of Common Stock. All capitalized terms used herein that are defined in the Registration Statement have the meanings assigned to such terms therein, unless otherwise defined herein. With your permission, all assumptions and statements of reliance herein have been made without any independent investigation or verification on our part except to the extent otherwise expressly stated, and we express no opinion with respect to the subject matter or accuracy of such assumptions or items relied upon.

In connection with this opinion, we have (i) investigated such questions of law, (ii) examined originals or certified, conformed or reproduction copies of such agreements, instruments, documents and records of the Company, such certificates of public officials and such other documents, and (iii) received such information from officers and representatives of the Company as we have deemed necessary or appropriate for the purposes of this opinion.

In all such examinations, we have assumed the legal capacity of all natural persons, the genuineness of all signatures, the authenticity of original and certified documents and the conformity to original or certified documents of all copies submitted to us as conformed or reproduction copies. As to various questions of fact relevant to the opinions expressed herein, we have relied upon, and assume the accuracy of, certificates and oral or written statements and other information of or from representatives of the Company and others.

To the extent relevant to the opinion expressed below, we have assumed that the Company will have sufficient authorized but unissued shares of Common Stock on the date of any issuance of shares registered pursuant to the Registration Statement.

Based upon the foregoing and subject to the limitations, qualifications and assumptions set forth herein, we are of the opinion that:

The Common Stock has been duly authorized and, when certificates representing the Common Stock have been duly executed by the Company and delivered to and paid for by the purchasers thereof for an amount in excess of the par value thereof and in accordance with the terms of the agreement under which they are sold, the Common Stock will be validly issued, fully paid and non-assessable.

The opinion expressed herein is limited to the federal laws of the United States of America, the laws of the State of New York and, to the extent relevant to the opinions expressed herein, the General Corporation Law of the State of Delaware (the "DGCL") and applicable provisions of the Delaware Constitution, in each case as currently in effect, and reported judicial decisions interpreting the DGCL and such provisions of the Delaware Constitution. The opinion expressed herein is given as of the date hereof, and we undertake no obligation to supplement this letter if any applicable laws change after the date hereof or if we become aware of any facts that might change the opinion expressed herein after the date hereof or for any other reason.

We hereby consent to the use of our name on the cover of the Registration Statements, the filing of this opinion as an exhibit to the Registration Statement and to the references to this firm under the

captions "Legal Matters" in the prospectus contained in the Registration Statement and "Legal Matters" in any prospectus supplement forming a part of the Registration Statement. In giving these consents, we do not hereby admit that we are in the category of persons whose consent is required under Section 7 of the Securities Act.

Very truly yours,

FRIED, FRANK, HARRIS, SHRIVER & JACOBSON

By: /s/ Stuart Gelfond

Exhibit 23.2

CONSENT OF INDEPENDENT PUBLIC ACCOUNTANTS

As independent public accountants, we hereby consent to the incorporation by reference in this registration statement on Form S-3 of our report dated February 9, 2001, on the Company's consolidated financial statements as of December 31, 2000 and 1999 and for each of the three years in the period ending on December 31, 2000 included in the Company's Form 10-K/A for the year ended December 31, 2000 and to all references to our Firm included in this registration statement.

Arthur Andersen LLP

Chicago, Illinois
January 16, 2002

Exhibit 23.3

CONSENT OF INDEPENDENT AUDITORS

The Board of Directors
SPX Corporation

We consent to the incorporation by reference in this Registration Statement on Form S-3 dated January 18, 2002 of SPX Corporation of our report dated January 25, 2001, except as to note 14 which is as of March 11, 2001, with respect to the consolidated statements of financial position of United Dominion Industries Limited as at December 31, 2000 and 1999 and the related consolidated statements of income, cash flows and changes in shareholders' equity for each of the years in the three-year period ended December 31, 2000, which report appears in the December 31, 2000 annual report on Form 40-F of United Dominion Industries Limited, which report is included in the Form 8-K of SPX Corporation filed April 13, 2001 and to the reference to our firm under the heading "Experts" in the Prospectus.

/s/ KPMG LLP

Chartered Accountants

Toronto, Canada
January 17, 2002