

# ANNUNCIATOR

January 1994



SARNIA



SECTION



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## Editor's Notes

**REMINDER:** The meeting date for January is one week earlier than the normal (last Monday) of the month. The Dinner Meeting will be held on January 24, 1994.

The ISA Education Committee is working on presenting two workshops in the Spring. Note the details in this newsletter and book your reservations now.

Sarnia ISA BBS service is up and running. Brian's report gives all the details required to use the service. Volunteers are needed for the tutor group. See Brian for details.

The picture of the Lambton College **Graduating Class of 1993** in Instrumentation and Control Technology is on **page 28**.

**Note:** To have your News Release or Career Opportunities published in the Annunciator, please forward the information to:

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Attention: Newsletter



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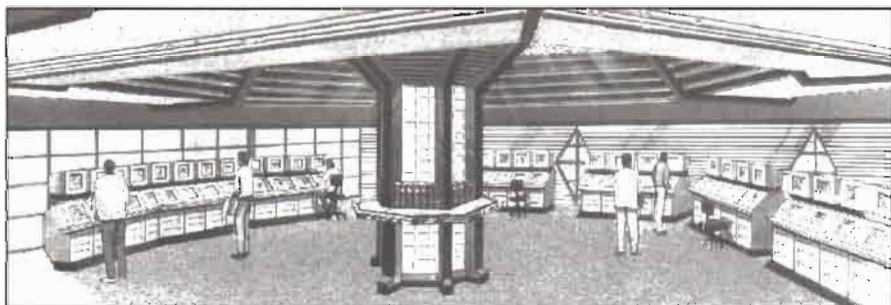
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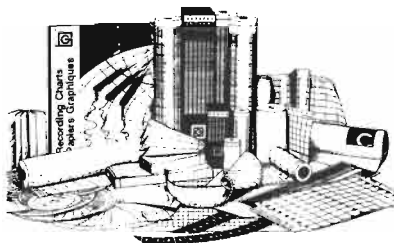
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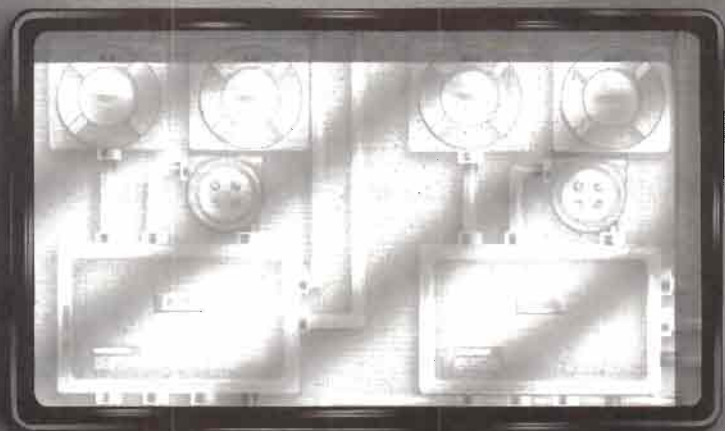
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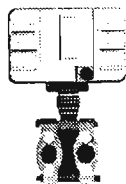
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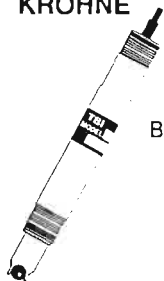
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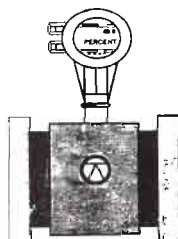
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# Instrument Society of America

*LAMBTON COLLEGE STUDENT SECTION*

## LAMBTON COLLEGE: STUDENT ISA SECTION

The second ISA dinner meeting cruised through the town on November 29th with an enlightening lecture on the production and boring of the CN tunnel underneath the St. Clair River. Mr. Doug Wilson of CN North America was the guest speaker on the topic. The student members were present in full with a count of 27.

Four Lambton College students were pleased to accept ISA scholarships. Ms. Jamie Haskell received a scholarship for the highest current grade point average at the end of term II, Mike Charlebois for the most improved academic standing at the end of term IV, and Joe Chaperchoine for the highest grade point average at the end of term V. Aldo Desantis was awarded the scholarship for the highest cumulative grade point average at the end of term VI.

On November 2, 1993 the third year Instrumentation and Control Engineering Technologist class travelled to Toronto for the Toronto ISA Section's Annual Instrumentation and Control Show. The show was held at the Airport Convention Centre and included about 90 booths hosted by manufacturers and suppliers of I/C equipment. About 4 hours were spent at the show, during which time, several interesting and informative displays of the latest technology were observed. After the show the class enjoyed dinner and then took time out to visit some of the attractions of Toronto.

In December the graduating class will be venturing out into the workplace hopefully, to successfully apply their knowledge. Best of luck to you all and to your futures.

At the moment the ISA Student Section Executive is as follows:

President: ..... Neil Clarke, 3rd year  
Vice President of Activities: ..... John Riley, 3rd year  
Secretary / Treasurer: ..... Randy Henderson, 2nd year  
Newsletter Editor: ..... Johnathan Pickard, 1st year  
Kates Report: ..... Garey Murray, 1st year  
3rd Year Representative: ..... Joe Caperchione  
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1st Year Representative: ..... Tom Beaton

To all of the student members at the College - as of January 1st 1994 three vacancies will be occurring due to the graduation of the 3rd year class. The vacancies are, President, Vice President of Activities and the 3rd Year Representative.

Finally to the 5th term students presently on co-op, and soon to be returning, would you please bring your membership renewal slips to the faculty advisor, Mike Grey by the first of the year.

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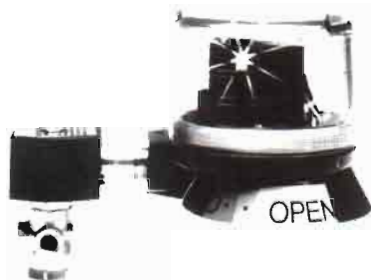
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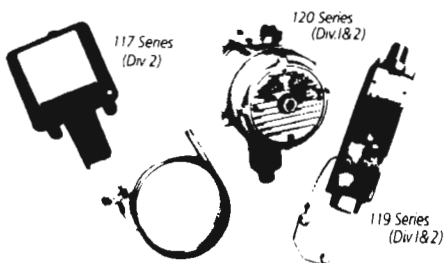
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CAPT will help Canadian companies identify and implement technology solutions to improve plant safety, productivity, energy conservation, environmental controls and competitiveness. Situated in the south wing of Lambton College main Campus, the three-floor facility houses 4645 square meters (50,000 square feet).

**GROUND LEVEL (Main floor)** - The Administration offices for: the Centre for Advanced Process Technology, the Instrument Society of America Training Materials Distribution Centre, the Centre for Environmental Management and Safety and Southwest Training Centre are located on this level. In addition there are two large seminar rooms, with several breakout rooms and a conference room.

**LOWER LEVEL** - Instrumentation and control applications laboratories, a workshop, one small and one large meeting room and a computer laboratory are located on this level.

The Control Systems Laboratory consists of host computer systems used to monitor, manipulate and simulate process variables for the purpose of achieving high efficiency processes. The lab is constructed to simulate an actual control room. The computers will include distributed control systems, expert systems, programmable logic controllers, etc.

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**UPPER LEVEL** - Faculty and adjunct faculty offices are located on the upper level. In addition there are two large seminar rooms for the Centre for Environmental Management and Safety, a computer laboratory and meeting room. Two academic areas are for future development.

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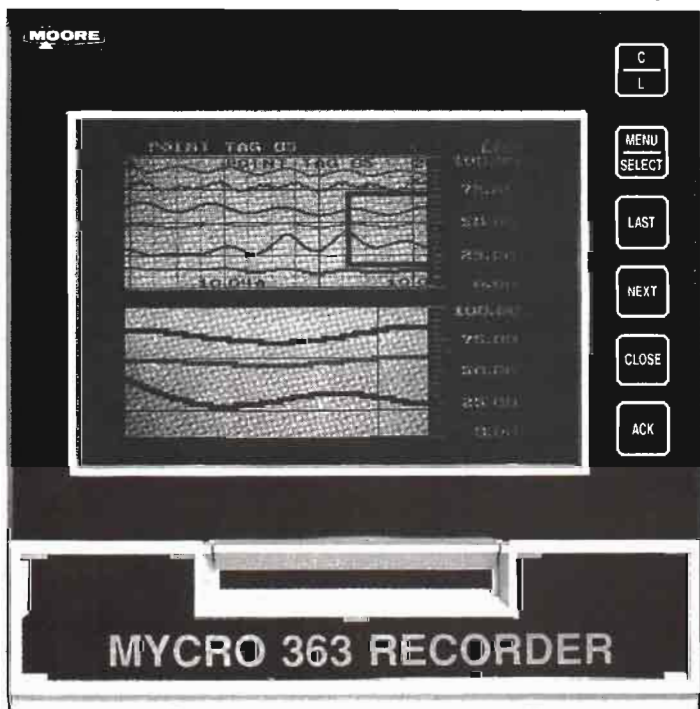
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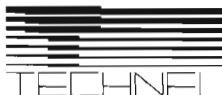


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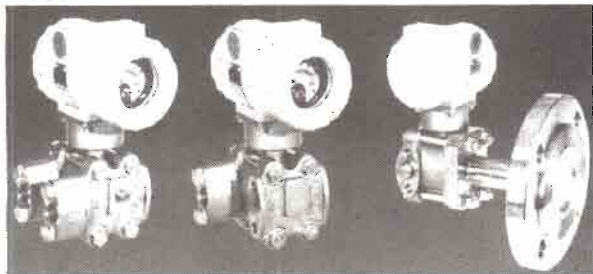
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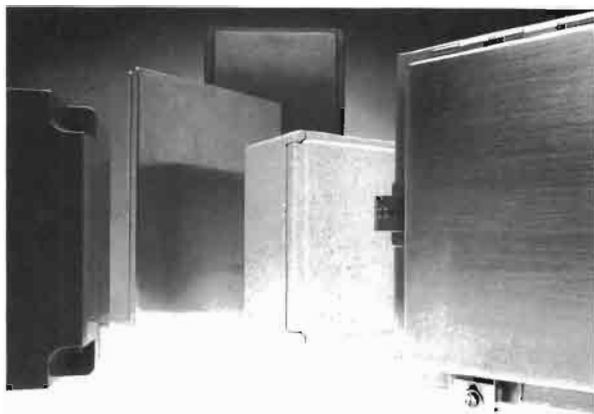
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# ISA PERSPECTIVES



LAMPTON COLLEGE GRADUATING CLASS OF 1993 - INSTRUMENTATION AND CONTROL TECHNOLOGY  
 BACK ROW (LEFT TO RIGHT)- NEIL CLARKE, JOHN RILEY, RICK BOUTERSE, JOE CAPERCHIONE, ROB TURNBULL,  
 BRIAN GREENWOOD, ROBERT ZING  
 FRONT ROW (LEFT TO RIGHT)- TERRY HUMPHREY, DARREN MACNAUGHTON, ROGER HAZZARD, BRENT LEGGE  
 MISSING- TIM SALAK AND JEFF HELESIC



DAVE GOOCH PRESENTING THE ISA SCHOLARSHIP AWARDS. (LEFT TO RIGHT) DAVE GOOCH, JAMIE HASKELL,  
 JOE CAPERCHIONE, ALBO DESANTIS. MISSING: MIKE CHARLEBOIS.

CONTINUED ON PAGE 31

# Instrument Society of America

## MEMBER RECORD CHANGE

This form is designed to facilitate your request for changes in your member record. In order to stay in touch with you, ISA needs to know when you move or change jobs. Also, ISA would like to upgrade your member status if you qualify.

Name \_\_\_\_\_ (Last) \_\_\_\_\_ (First) \_\_\_\_\_ (Middle)

ISA Member Number: \_\_\_\_\_ Day-time Phone Number: \_\_\_\_\_

Check all changes that you are requesting:

\_\_\_\_\_ Change my address, phone number and/or company (Complete Part 1)

\_\_\_\_\_ Change my section affiliation (Complete Part 2)

\_\_\_\_\_ Apply for Life Member/Life Fellow Status (Complete Part 3)

\_\_\_\_\_ Apply for Senior Member Status

### PART 1: MOVING?

PLEASE CHANGE MY ADDRESS, COMPANY NAME AND/OR PHONE NUMBER:

Preferred  
Mailing  
Address

\_\_\_\_\_ Home

\_\_\_\_\_ Company

Please provide your address exactly as you wish it to appear on our official records.

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### PART 2: CHANGING SECTIONS?

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### PART 3: APPLYING FOR LIFE MEMBER/LIFE FELLOW STATUS?

PLEASE CHANGE MY STATUS TO LIFE MEMBER/LIFE FELLOW: (You must meet both qualifications below.)

\_\_\_\_\_ I have retired from full-time employment.

\_\_\_\_\_ I have been a regular Member, Senior Member, Fellow or Honorary Member for twenty (20) or more years. (Years as an Associate or Student member do not count toward the 20-year requirement).

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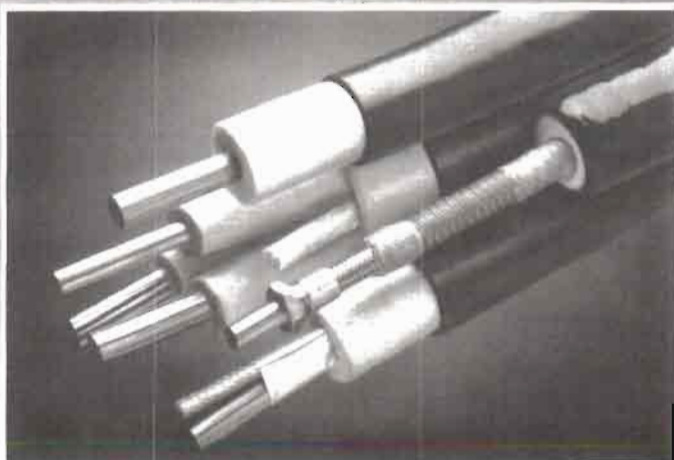
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## ISA PERSPECTIVES CONTINUED FROM PAGE 28



OUR "PRES.", BILL ARUNDELL, WISHING US SEASONS GREETINGS.

NOVEMBER'S SPEAKER, DOUG WILSON (LEFT), RECEIVING A TOKEN OF APPRECIATION FROM PROGRAM CHAIRMAN, IRVIN HAWKES.



DISTRICT 13 V.P., HOWIE WHITTON (CENTER), CHATTING WITH MEMBERS JOE HAWLIK (LEFT) AND LARRY BAUMBER (RIGHT).





## DINNER MEETING HIGHLIGHTS

NOVEMBER 29, 1993

The second dinner meeting for 1993 / 1994 was held on Monday, November 29, 1993, at the Sarnia Golf and Curling Club. The 98 members, guests and student members from Lambton College were welcomed by president Bill Arundell.

Following a BBQ steak dinner Brian Smith gave an update on the progress being made with the computerized bulletin board and the status of donations received to date in support of this project. Brian and his committee are to be commended on their initiative and perseverance in making this project a reality. A demonstration of the bulletin board system may be available for the January meeting.

The Sarnia Section again presented 4 scholarships to students at Lambton College. The recipient students were introduced at the dinner meeting. Photos and further information can be found in this issue of the ANNUNCIATOR.

The guest speaker for the evening was Mr. Doug Wilson, Manager, Special Projects, CN North America. Doug gave an interesting talk on the history, construction and economic factors of the 100 year old and the new replacement rail tunnel being bored under the St. Clair River from Sarnia to Port Huron. Construction cost of the tunnel and associated work will exceed \$200 million dollars.

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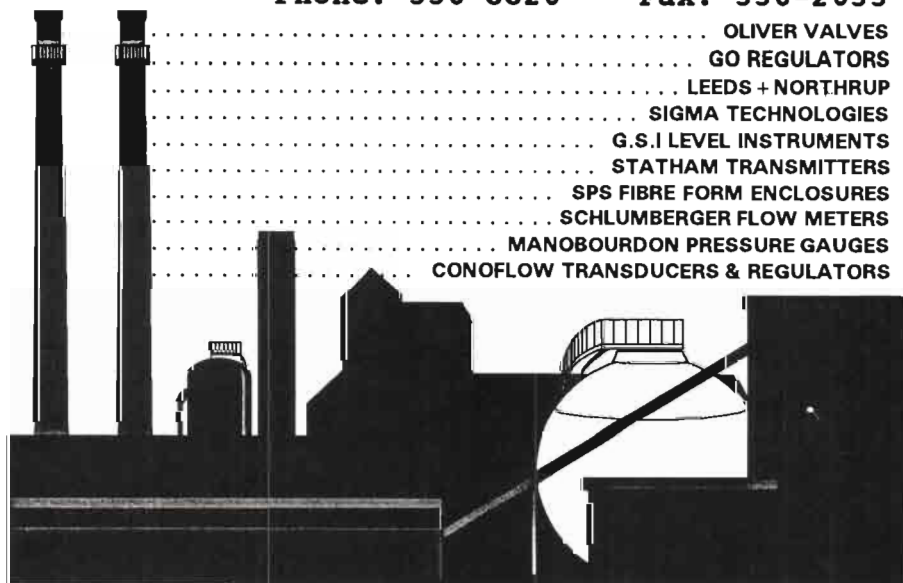
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## DID YOU KNOW?

Summary of your Sarnia ISA Executive Meeting  
held November 8, 1993

Plans are already underway for the 1995 Sarnia ISA show, as Larry Corbett begins the process of putting together the show committee. If you have any suggestions that you feel would enhance the next show, please feel free to approach the committee with your ideas.

Plans for the local ISA "Bulletin Board Service" or BBS are in full swing. Brian Smith has indicated that donations are being solicited from two types of sources; local major corporations and community businesses. With sufficient funding the basic equipment will then be purchased. The support for this project has been very encouraging and we urge any companies which have not yet subscribed to please consider contacting Brian and participating in the development of this system. The concept of an electronic bulletin board is not unique, but we envision the Sarnia ISA BBS as a system unique in its quality, accessibility, and active membership. This goal will only be realized with your input at the different stages of development and refinement of the system, and we look forward to your continuing involvement.

Once again, we are pleased to report that four scholarships have been awarded to Lambton College Students for their achievements in the Instrument and Control Engineering Technology program. We believe in the recognition of excellence and effort, and would like to thank the four recipients for setting high standards for themselves and their classmates. Our sincere wishes for continued success to all of the students.

We are beginning a new year again, and we are in the beginning stages of several large projects, with the 1995 ISA show, the Sarnia ISA BBS and the development of our student membership. The common thread of success among all of these endeavours will be the amount of effort that goes into building a strong base to work from. The stronger your base, the more you can expand, the higher you can climb, the more resources you have to draw on, and the more success you will command. We all need to get involved to build an unshakeable base for the Sarnia ISA. Best wishes to everyone for a successful and rewarding year.

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# **ISA Sarnia Section**

## **DINNER MEETING NOTICE**

**JANUARY 24, 1994**

**SARNIA GOLF & CURLING CLUB**

**COCKTAILS 6 pm**

**DINNER 7 pm**



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# SARNIA ISA BBS UPDATE

The BBS committee surveyed attendees at the Sept. 27/93 dinner meeting. The survey results are shown below.

## Sarnia ISA Section Computer Questionnaire Results

The results of the 42 questionnaires handed in at the Sept.27/93 dinner meeting plus 11 additional Novacor results are as follows:

1. *Do you have access to a computer?*      Work 41   Home 34   Neither 2
2. *Do you have access to a modem?*      Work 21   Home 13   Neither 23
3. *What kind of computer?*      IBM/compatible 46  
Macintosh 2  
Other 3
4. *Would you take advantage of an ISA Sarnia Section electronic bulletin board service?*  
Yes 39   No 2  
Don't know 2  
*Are you interested in receiving more information?*      Yes 42
5. *Would you be interested in:*  
a) *Learning more about computers/modems?*      Yes 36   No 10  
b) *Offering expertise as an instructor/trainer?*      Yes 12   No 30
6. *What kind of information exchange would you like to have access to?*
  - Vendor, Manufacturer.      xxxxx
  - Local Rep listing - manufacturers & products.      xxxx
  - Innovative solutions to long standing problems.      xxxxx
  - Technical articles.      xxx
  - New products available.      xxx
  - Courses.      xxx
  - Section Information.      xx
  - Access to technical papers.      xx
  - Downloadable sizing programs.      xx
  - Standards.      x
  - ISA Publications with price list      x
  - A.P.I. / ANSI Instrumentation & Control publications.      x
  - ISA news, ex meeting minutes.      x
  - Jobs & help wanted.      x

Thank you to everyone who participated in the survey. The results show that most respondents have access to a computer and almost half have access to a modem. There is an interest in having a BBS and in learning more about this technology. Information about vendor vs manufacturer and local representatives plus inovative solutions to long standing problems were the most popular. There were some respondents who are willing to share their expertise as instructors.

The BBS committee, Brian Smith, Ian Shouldice, Mike Spearman and David Guthrie, launched a fund raising campaign to solicit donations from local industry and community businesses. A mission statement was prepared to focus the committee's activities. A solicitation package was produced which consisted of a cover letter, justification and reply form. Major industry contributions would be used to purchase computer/modem hardware. Community business contributions would be used to purchase licensed software, etc.

The Sarnia section executive passed a motion which gave the BBS committee approval to purchase and set up a BBS when \$3,000 had been collected. Twenty-two local industries and thirty eight community businesses have been canvassed for donations. To date \$4,200 has been collected. BBS software and a modem have been purchased and a phone line installed. Dedicated computer hardware will be purchased when the remaining funds have been received. If you have experience with modems then call 541-0427 and see what has been set up so far.

First time callers will have to register as new users. A number of questions will have to be answered. Your initial security level will be set to 10 which will restrict you from performing most functions. You will have to be validated by the Sysop before your security level will be increased. Then you will be able to download files, use message bases, etc. If you need help in setting up your modem or connecting to the BBS we will set you up with a tutor.

Some local message bases (Conferences) and file areas have been set up. Included conferences are Instrumentation measurement and control subject areas such as Analysis, Flow, Level, Pressure and Control Valves. Other conferences include ISA Executive, Newsletter, Student Section, Education, Buy & Sell, Jobs Wanted, Jobs Available, etc.

The File system will include vendor sizing & selection programs, general interest PC utilities, virus scanner & clean up, Microsoft Windows utilities, modem terminal, off-line mail reader, information files, plus others of general interest.

One function that has not been set up is called Doors. A door is a dos program that can run on the BBS computer and be displayed and controlled by your computer. It will take me some time to set up this function and test it out.

A tutor group is planned to provide free start-up assistance and support to new callers. This should enable callers to quickly learn how to access the BBS, send/receive messages, upload and download files. Please let me know if you are interested in helping out.

Users are encouraged to make requests for additional features. In the future there will be echo mail to other ISA sections. We have had discussions with Fred Sheane of the CAPT about access to ICSNet for communications to other sections. This subject will require further development prior to implementation.

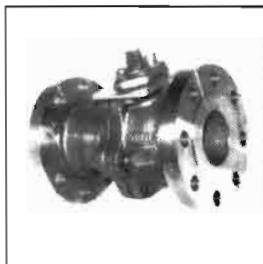
Basic membership will be free to all callers during the first year. Users may be asked to make a donation for higher level access. ISA members would be asked to donate less than non ISA members. Local professional groups may be contacted to utilize the system as non-members. It is intended that the BBS be self supporting.

For further information or to volunteer your services, contact Brian Smith at Novacor Corunna, 862-2911 x2550, fax 862-2170. Or call the BBS and leave the Sysop a message.

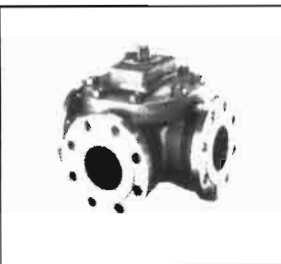
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The defined limits of a measurement are known as error or inaccuracy. It is often misnamed as the accuracy of an instrument. Accuracy is the reciprocal of inaccuracy. If, for example, a measuring instrument is said to be accurate to 0.01%, it has a built in error of 99.99%!

An Instrument is a device that is used to perform a measurement. If it is used to measure the value of a process parameter without performing any adjustment to the process parameter, it is called a Process Sensor or Process Element. A Primary Element is a misnomer in the science of Measurement. A Primary Element in the science of Metrology is that element that is directly traceable to a standard defined and maintained by the National Bureau of Standards. If it is used to measure the value of a process parameter and uses that measurement to adjust the value of the process parameter directly, it is called a Regulator. If an instrument is used to measure the output or result of the sensor or element for transmission of a signal to another instrument without changing the range of values of this output or result but changing the output or result to a predefined ratio, it is known as a Repeater. If an instrument performs these same functions but covers the measured value to a predefined signal range for transmission to a remote instrument, it is known as a Transmitter.

If an instrument is used to measure a value of a process signal, measure a value generated by a process sensor or process element, or measure the value generated by a repeater or transmitter and use that value to adjust the value of the process parameter, it is called a Controller. If an instrument performs these same functions without adjusting the value of a process parameter, it is called a Receiver.

If an instrument is used to measure an output signal from a controller and uses that measurement to directly adjust a process parameter, it is called a Final Control Element.

All instruments are transducers or converters of signal information. There are, in addition, special instruments denoted as Relays that perform special functions related to signal conditioning, switching and alarming. Also some instruments may have dual functions. If a Flow Switch simply reports to a Receiver that a liquid is flowing or not flowing, it is being used as a Process Element. If that same Flow Switch activates a solenoid actuated valve as a response to the condition of flow, it is used as a Regulator.

If an instrument is used to provide standardized inputs to and measure the generated outputs of the aforementioned instruments with the function of allowing the correction of errors in the generated outputs, it is called a Calibrator. The process of measurement AND correction using a Calibrator is called Calibration.

Examples of process parameters are pressure, absolute pressure, differential pressure, level volumetric flow, mass flow thermometry, pyrometry, heat flux, force, torque, tension, motion, speed, acceleration, velocity, dimension, proximity, nuclear radiation, acoustical radiation, optical, magnetic properties, magnetostrictive properties, resonance, ionography, humidity, conductivity, viscosity, consistency, density, elasticity, galvanometric properties, rheometry, compression, shock, displacement, thickness, fluorescence, refractometry, photometric properties, sensitometry, densitometry, colorimetry, freeness, turbidity, and opacity to name a few! These parameters differ from Analytical parameters in that the Analysis Instruments are used in a laboratory rather than on-line in a process. Examples of analytical parameters are those resulting from spectroscopy, microscopy, stress, strain, stretch, accelerometry, extensimetry, chromatography, etc.

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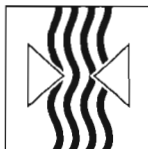
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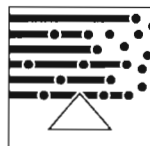
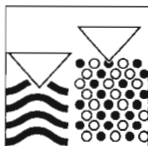
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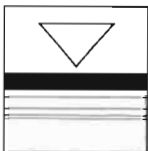


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# Meeting Dates

## MEMBERSHIP DINNER MEETINGS

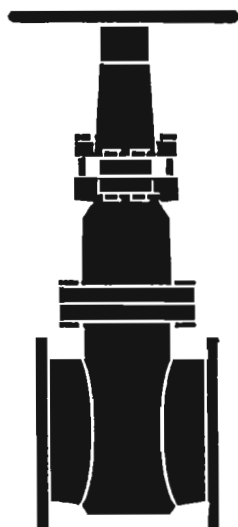
Date	Place
September 27, 1993	Sarnia Golf & Curling Club
November 29, 1993	Sarnia Golf & Curling Club
January 24, 1994	Sarnia Golf & Curling Club
March 28, 1994	Sarnia Golf & Curling Club
May 30, 1994	Sarnia Golf & Curling Club

**Time:** Cocktails @ 6:00 p.m. **Dinner:** @ 7:00 p.m.

## Executive Meetings

Date	Place
September 13, 1993	Drawbridge Inn
November 8, 1993	Drawbridge Inn
January 10, 1994	Drawbridge Inn
March 7, 1994	Drawbridge Inn
April 25, 1994	Drawbridge Inn

**Time:** 7:00 p.m.



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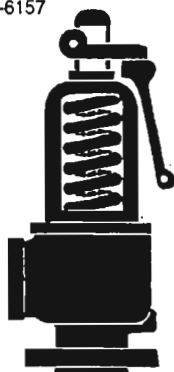
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# NEWS RELEASE

## ABB KENT-TAYLOR

'Aquaprobe' - a new development which meets the water industries' needs for a cost-effective alternative to in-line flow metering is being launched by ABB Kent-Taylor.

Compatible with a wide range of recorders and data loggers for comprehensive data collection, this new insertion flowmeter can be used in two ways. It can be permanently installed as a monitoring device for economic management of the water supply, or used as a portable site surveying tool to check for leaks or to identify hydraulic problems in existing networks. Aquaprobe's high sensitivity enables the instrument to be used to traverse across the pipe to establish the flow profile.

## BRIAN CONTROLS

**APPOINTMENT:** Brian Controls is pleased to announce the addition of **JEFF TALBOT** to the Outside Sales Force.

**NEW GROUP:** Brian Controls is pleased to announce their new Safety and Environmental Products Group. Our safety instrumentation capability now includes toxic gas detection (portable and fixed); air sampling, noise and heat stress monitoring, ambient air quality and mass flow measurement. At Brian, we are proud to include Ametek, Bacharach, BIOS, Environics, Interscan, Kurz, Monitor Labs, and Metrosonics to our product line.

## CANTROLS

**CANTROLS EQUIPMENT (MISSISSAUGA) LTD.** are pleased to announce their appointment as Exclusive Manufacturer's Representative in Eastern, Southern and Southwestern Ontario for **VALTEK CONTROLS LIMITED**, a major Canadian manufacturer of globe, rotary and severe service control valves, plus the revolutionary StarPac Intelligent Automation System. Valtek International is a subsidiary of **The Duriron Company**.

In addition, **CANTROLS** have been appointed Master Rep. for **AUTOMAX CONTROLS, INC.** line of pneumatic and electric rotary actuation systems including positioners and switches; Exclusive Manufacturer's Representative for **KAMMER VALVES, INC.**, specialists in cryogenic, exotic material and low flow control valves; and approved Marketers of **DURIRON CANADA'S DURCO** automated lined and unlined plug valves, butterfly valves and Atomac lined ball valves. These companies are also subsidiaries of **The Duriron Company**.

To complement these automated and control valve products, **CANTROLS** are now an authorized distributor of **KITZ** ball valves, both manual and automated.

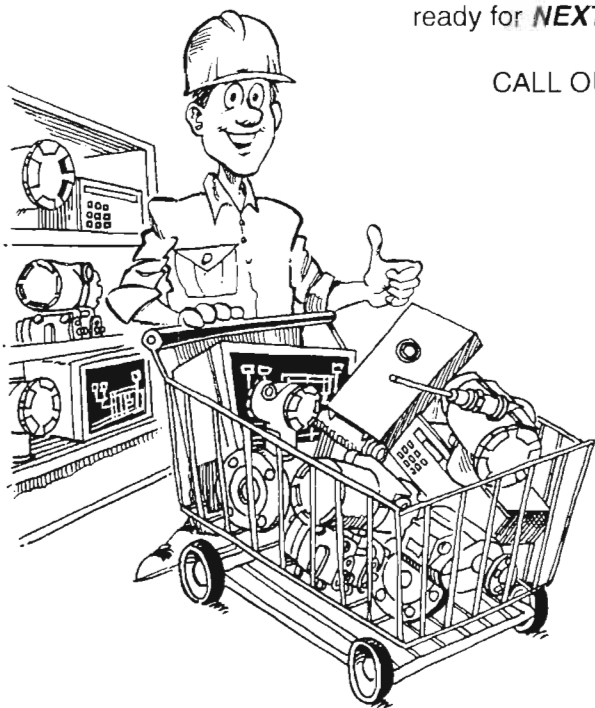
The addition of the quality products of these manufacturers to the **DANIEL** pipeline gate ball valves, **CLARKSON** rubber-lined gate valves, **FLEX** pinch valves, **COLLINS** Teflon valves and **REXA** electrohydraulic actuators already offered by **CANTROLS** provides a powerful line-up to provide solutions to all of your valve problems.

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The logo for Transmation inc., featuring a stylized "T" with a horizontal line and an arrow pointing right, followed by the word "TRANSMATION" in a bold, sans-serif font, and "inc." in a smaller font.

The logo for Durco, featuring the word "DURCO" in a bold, sans-serif font, with a stylized circular icon to the right.

The logo for Appalachian Controls Co., featuring a stylized mountain range icon above the word "Appalachian" in a serif font, and "Controls Co." in a smaller font.

## Kämmer

### Valves

The logo for AGI Atlantic Group Inc., featuring a circular icon with the letters "AGI" inside, followed by the text "ATLANTIC GROUP INC." in a bold, sans-serif font, and "Specialty Valves and Process Equipment" in a smaller font.

# KITZ

The logo for Bebeco Industries, featuring a stylized "B" and "I" inside a square icon, followed by the text "Bebco Industries" in a bold, sans-serif font.



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**TUBETECH** has a dedicated team of instrumentation specialists serving customers from offices located in Sarnia, London and Stoney Creek.

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**ANNOUNCEMENT:** We are pleased to announce that **OVANTUM SALES**, effective immediately, is joining forces with us to better serve your future needs. Ralph Fish brings to us extensive sales knowledge and experience gained over many years. We offer a wide range of specialty instrumentation and automatic control products to handle your process control requirements. Ralph will concentrate his sales and marketing efforts in the Western Ontario region from London west.

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**VARIAN**

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**SALES COVERAGE CHANGE:** Effective Oct. 1/93, Dan Williams will be your contact for Spectroscopy Products and Supplies. Chris Walker will be your contact for all Chromatography products and supplies. Between the two of us we offer you 28 years in this industry. We are confident we can offer you informed, courteous, competitive and succinct solutions to all your analytical problems.

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## **ISA Education Committee Report**

The Education Committee is currently working on presenting 2 workshops early in the Spring. They are:

1. **Materials and Metallurgy for Instrumentation**
2. **Instrument Field Installation - A Practical Guide**

These workshops will be between 6 and 8 hours in duration. They will take place either in 2 evenings during the week or as a one day weekend session. We are aiming for the cost to be on the order of \$125.00 to \$150.00 total. The final figure will depend on where the workshops are held.

These workshops will be aimed at people in instrumentation, who need to improve their knowledge of these topics. It is intended that they be practical primers, without a lot of heavy theoretical information.

If anyone would like more information, or would like to indicate their interest in either of these workshops, please contact either Dave Gooch, at **337-1350** or Roland Smith at **383-1513**.

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11 March, 1993

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Copies to: Mr. André Couturier

(cc:DP:PPF, 11/03/93)



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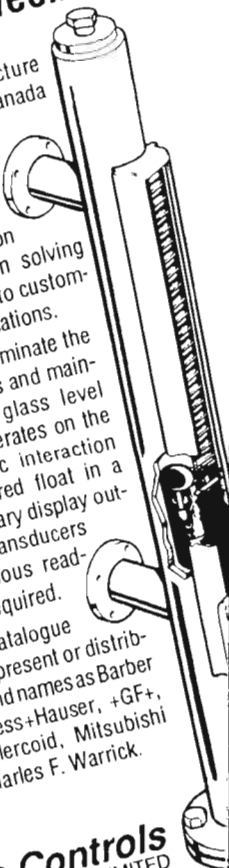
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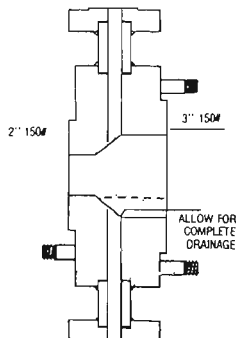
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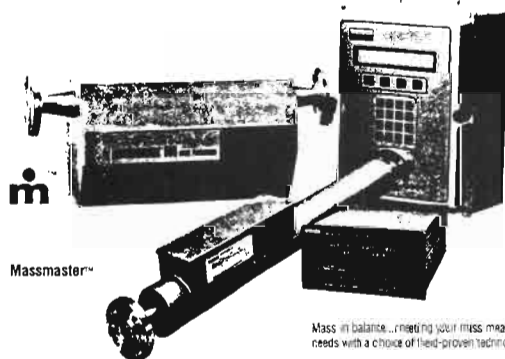
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### Fact

- Over 4,000 TDC 3000 systems are installed worldwide
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## Beyond basic control

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### Fact

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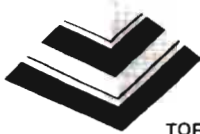
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- PH Recorders & Controllers
- Dewpoint Systems

- Thermocouple & RTD Elements
- High Temperature Assemblies
- M-System Temperature Transmitters
- Digital Temperature Indicators
- Relative Humidity Transmitters
- Conductivity Monitors/Controllers
- Moisture Content

### PRESSURE

- Low Cost Solid-State Pressure Sensors
- Precision Pressure Transmitters
- Aerospace/Military Pressure Transducers
- Low Cost P-to-I and I-to-P Converters
- Digital Manometers and Barometers
- Air Data Test Sets
- Pressure Calibration and Testing Services
- Low Pressure Transmitters

- Druck Industrial & Process Pressure Transducers
- Druck CSA Intrinsically Safe Pressure Transmitters
- Plastic Melt Pressure Transducers and Transmitters
- Digital Pressure Gauges
- Portable Pitot Static Testers
- Automatic Calibration for Aircraft Instruments
- High Pressure Down Hole Transducers

### SIGNAL CONDITIONERS LIGHTNING PROTECTION UNITS BARGRAPH INDICATORS DIGITAL PANEL METERS

- Field Mounted Two-wire Signal Conditioners
- M-System CSA Approved Isolators
- Transducer Signal Conditioning
- Power Transducers
- Computation Units
- Bargraph Indicators
- Instrumentation Amplifiers
- Programmable Transducer Amplifiers
- Low Cost Digital Process Meters

- Field Programmable Signal Conditioners
- Limit Alarms
- Power Supplies
- M-System Lightning Protection Units
- Frequency Transmitters
- Pneumatic Transducers
- Programmable Filter/Amplifiers
- Smart Digital Panel Meters

### INTRINSIC SAFETY BARRIERS

- Plug-In Shunt Diode Safety Barriers
- Elcon Instruments, Isolators

- High Density Intrinsically Safe Isolated Barriers
- Transformer Isolated Barriers and Signal Conditioning

### TEST MEASUREMENT AND CALIBRATION INSTRUMENTS

- Deadweight Testers
- Druck CSA Intrinsically Safe Portable Digital Pressure Indicators and Calibrators
- Digital Pressure Gauges
- Druck Portable Digital High Pressure Hydraulic Calibration Systems
- Pocket Digital Pressure Gauges
- Unomat Smart Loop Calibrator for Milliamps
- A.S.L. Resistance Thermometry Bridge
- A.S.L. Temperature Calibration Baths
- A.S.L. Standards Psychrometer

- Unomat Frequency Tester & Calibrators
- Piston Gauges
- Druck Multichannel Portable Digital Pressure Indicator and Calibrator
- Druck Precision Pressure Controller/Calibrators
- Unomat Multi-Function Calibrators
- Pressure Calibration Services
- A.S.L. Automatic AC Resistance Bridge
- Precision Thermometer
- Low Pressure Calibrators

### LEVEL FLOW

- Depth/Level Pressure Transducers and Transmitters
- Liquid Level Control Systems
- Leak Detection Systems
- Overfill Prevention Control Systems
- Flow Meters

- Tank Level Gauging
- Precise Liquid Inventory Management
- Vehicle & Railcar Grounding Systems
- Bottom Loading Systems
- Flow/Level Switches

### POSITION DISPLACEMENT LOAD FORCE

- Rectilinear Position Transducers
- Linear Position and Velocity Transducers
- Linear Displacement Transducers
- Force Sensors

- Rotary Position Transducers
- Programmable Position Monitors
- Linear Position Indicators
- Load Cells

### VIBRATION

- Low Cost Piezoresistive Accelerometers
- Instrumentation

- Velocity Sensors
- Monitors

### RECORDERS

- Graphic Recording Systems
- Transient Data Recorders
- Instrumentation Recorders

- Digital Recording/Analysis Systems
- Transient Digitizers
- Waveform Digitizers

### DATA ACQUISITION AND CONTROL SYSTEMS

- Transient Acquisition & Analysis Systems
- Static & Dynamic Data Acquisition Systems
- Portable Battery-Powered Data Acquisition Systems

- Signal Capture & Analysis Systems
- Camac (ANSI/IEEE) Based Data Acquisition Systems

• SALES • SERVICE • CALIBRATION • AUTO-RECALL • ON-SITE •



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## Membership Form

### INSTRUMENT SOCIETY OF AMERICA

This form may be used by any interested person wanting to join ISA or ISA International, including students. For assistance, contact ISA Member & Customer Services at (919) 549-8411.

Please type or use block letters. Sign and date below, in Section 3.



1

Name \_\_\_\_\_ (family/last name) \_\_\_\_\_ (first name) \_\_\_\_\_ (middle initial) \_\_\_\_\_ ☐ Male ☐ Female Birthdate \_\_\_\_\_

Company Name \_\_\_\_\_ Division/Works \_\_\_\_\_

Position/Title \_\_\_\_\_

☐ Check here if you are a full-time student and complete the following: School \_\_\_\_\_ Year of Graduation \_\_\_\_\_

Mailing Address: ☐ Home ☐ Work NOTE: Student member applicant, please list permanent home address.

Street Address/P.O. Box \_\_\_\_\_ Mail Stop \_\_\_\_\_

City \_\_\_\_\_

State/Province \_\_\_\_\_ Postal Code \_\_\_\_\_ Country \_\_\_\_\_

Telephone (include area code or country/area code) \_\_\_\_\_ FAX \_\_\_\_\_ Telex \_\_\_\_\_

Have you ever been a member of ISA? ☐ Yes ☐ No Previous years of membership \_\_\_\_\_

Assign me to the \_\_\_\_\_ section or the section closest to my home address.

Highest Educational Degree Earned ☐ High School ☐ Associate ☐ Bachelor ☐ Master ☐ Doctorate

Are you a registered professional engineer? ☐ Yes ☐ No State/Country Registered \_\_\_\_\_

☐ From time to time we may make our mailing list available to companies whose products or services may interest you. If you do not want your name exchanged, please check this box. We will respect your wishes.

2

**NOTE:** Sections 2, 3, and 5 must be completed for processing.

Check your primary job function:

- ☐ A: General or Corporate Management
- ☐ B: Control Systems Engineering
- ☐ C: Design Engineering
- ☐ D: Production Engineering
- ☐ E: Plant Engineering or Maintenance
- ☐ F: Software Engineering
- ☐ G: Plant Information Systems
- ☐ H: Systems Integration
- ☐ I: Measurement, Testing, Quality, or Standards
- ☐ J: Research and Development
- ☐ K: Technical or Engineering Support
- ☐ L: Operations
- ☐ M: Purchasing or Procurement
- ☐ N: Education or Training
- ☐ O: Marketing or Sales
- ☐ P: Others: Describe \_\_\_\_\_

What is the primary end product manufactured or service performed at your company location? \_\_\_\_\_

☐ Check here if no manufacturing is done at this location.

3

Signature \_\_\_\_\_

Date \_\_\_\_\_

5

#### Dues Payment Information

Please select the level of membership for which applying.

- ☐ Regular Member: \$60 US (Tax Deductible) \$ \_\_\_\_\_
  - ☐ Student Member: \$9 US (Limited Benefits) \$ \_\_\_\_\_
  - ☐ Division Membership: \$5 US each. \$ \_\_\_\_\_
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- must be an ISA member.
- Total Amount Due \$ \_\_\_\_\_

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- ☐ Check ☐ Money Order
  - ☐ American Express ☐ Eurocard ☐ MasterCard ☐ Visa
- Acct # \_\_\_\_\_ Exp. Date \_\_\_\_\_

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- ☐ Wire Transfer — Add \$5.00 US for processing. Send to ISA Account #1126294, Central Carolina Bank, ABA063100465. Transfer must show applicant's name and address.
- ☐ UNESCO Coupons ☐ Money Order — Add \$5.00 US for processing.

Mail completed form and payment to: **Instrument Society of America**  
**Member & Customer Services**  
**PO Box 3561**  
**Durham, North Carolina 27702**  
**USA**

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4

#### Automation & Technology Divisions

- ☐ (A) Analysis\*
- ☐ (C) Robotics & Expert Systems
- ☐ (D) Computer Technology\*
- ☐ (E) Open Systems Interconnection
- ☐ (H) Process Measurement & Control\*
- ☐ (I) Maintenance
- ☐ (J) Test Measurement\*
- ☐ (M) Automatic Control Systems\*
- ☐ (N) Telemetry & Communications
- ☐ (P) Electro-optics
- ☐ (W) Management\*

#### Industries & Sciences Divisions

- ☐ (B) Aerospace Industries\*
- ☐ (F) Mining & Metals
- ☐ (G) Chemical & Petroleum Industries\*
- ☐ (K) Construction and Design\*
- ☐ (L) Pulp & Paper Industry\*
- ☐ (O) Power Industry\*
- ☐ (R) Food & Pharmaceutical Industries\*
- ☐ (T) Textile Industry
- ☐ (U) Automotive & Vehicular
- ☐ (X) Water & Wastewater Industries
- ☐ (Y) Glass & Ceramics Industries
- ☐ (Z) Marketing & Sales\*

\* Students are entitled to one free membership each in the Automation & Technology and Industries & Sciences Divisions. Please choose and mark from the asterisked selections.



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Stocking Distributor For



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- RF/Capacitance
- Vibration Monitoring and Control
- I/P - P/I Controls



- Rupture Disc
- Check Valves
- Line Blinds

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- Rotameters
- Positive Displacement Meters
- Turbine Meters
- Mass Flow Meters
- Inventory Management System



- The Heat Tracing Specialists



- The Instrument Heating Specialists

CANCOPPAS LIMITED



- Epic Waste Water Samplers
- Foxcroft Chlorine Analyzers
- Regal Gas Chlorinators
- Royce Instruments
- MSR - Magmeters



- Instrument Tubefittings
- Instrument Valves



## SYBER SYSTEMS INC.

TEL. 905-792-6677 FAX. 905-792-7742

### PRODUCT LIST

- MTL • Intrinsically Safe Barriers
- A.H. Emery • Hydraulic Load Cell Weighing Systems
- Fuller • Electronic and Pneumatic Liquid Filling Systems
- Hillcroft • IS Earth Proving Unit • for tanker trucks etc.
- RGS • Intrinsically Safe Valves
- Lorad • Unique, Full-bore Valves and Instrument Isolators
- Expo Safety Systems, Purging and Pressurisation

For Div 1 and Div 2, the Mini-X and Mini-Z -Purge Systems are fully pneumatic in operation, and conform to North American Standards, NFPA 496-1993. They are acceptable to Ontario Hydro, for installation in Ontario.

### TYPICAL APPLICATIONS

Computer Monitors & Terminals.  
Programmable Controllers.  
19" Rack Apparatus  
Panels & Switchgear.

Chart & Data Recorders.  
Gas Analysers.  
Motor Control Centers.  
Condition & Monitoring.

# USERS DIRECTORY

*This index lists manufacturers and trade-names alphabetically and enables users to determine the local representative for a particular manufacturer or product.*

## Manufacturer / Tradename

3-D  
3M Circuit Tracer Kit  
A.H. Emery  
A.W. Sperry  
ACR Systems  
AEMC  
AGI  
AGM Electronics Inc.  
AMS Analytical Systems  
API Meters  
ARi  
ASCO  
ASCO  
ASCO  
ASCO  
Accugard  
Accutech  
Acromag  
Acrotech  
Action Instruments  
Air Flow  
Alnor  
Alnor Instruments  
Altek  
Altek  
American  
American Cylinders  
Ametek  
Ametek  
Ametek - Analyzers  
Ametek - Mansfield & Green  
Ametek - PMT  
Ametek - U.S. Gauge  
Amprobe  
Amri Valves  
Analogic  
Anarad  
Anderson Greenwood  
Apollo  
Appalachian Controls  
Applied Automation  
Arjay  
Armatek  
Armstrong  
Armtec  
Ashcroft  
Ashcroft-Dresser  
Ashford Valve  
Astro International  
Atkins  
Autocal  
Autoclean  
Automax  
Autotech  
Azonix

## Local Sales Representative

Alpha Controls & Instrumentation  
Transcat  
Syber Systems Inc.  
Transcat  
Alpha Controls & Instrumentation  
Transcat  
Cantrols  
Vermeer Engineering  
Vermeer Engineering  
Lisle-Metrix Ltd.  
Alpha Controls & Instrumentation  
Conval Equipment  
Lakeside Controls  
TubeTech  
Westburne Lytle  
Leeds & Northrup, Canada  
Brian Controls  
Willer Engineering  
Transcat  
Cambridge Controls  
Transcat  
Baker Instruments Ltd.  
Transcat  
Alpha Controls & Instrumentation  
Transcat  
elenex Ltd.  
Provincial Controls  
Brian Controls  
Transcat  
Westech  
Brian Controls  
Brian Controls  
Brian Controls  
Transcat  
Sharp Valve & Instrumentation  
Transcat  
Vermeer Engineering  
Cantech Controls  
Romatec  
Cantrols  
Westech  
TubeTech  
Armatek Controls  
Willer Engineering  
Bestobell Canada  
Transcat  
Conval Equipment  
Bestobell Canada  
Deteck Industries  
Transcat  
Leeds & Northrup, Canada  
Leeds & Northrup, Canada  
Cantrols  
Davis Controls  
Transcat

**Manufacturer / Tradename**

B & K  
 B/W  
 BEHA  
 BEJ  
 BOILER-GARD  
 BS & B  
 Bacharach  
 Bacharach  
 Bacharach - Hand Held Instruments  
 Badger Meter  
 Badger Meter - Research Control Valves  
 Barber-Colman  
 Barksdale  
 Barnant  
 Baumann Control Valves  
 Beamex  
 Bebeco Industries  
 Beckman Industrial  
 Bellofram  
 Bellofram  
 Berthold  
 Beta  
 Bi-Lok  
 Biccotest  
 Biddle  
 Bio-Tek  
 Bios International  
 Brandt  
 Branson  
 Brian  
 Brooklyn Thermometer  
 Brooks Instrument  
 Burkert  
 Burkert Contromatic  
 Cajon Pipe Fittings  
 Cal  
 Canadian Meter  
 Cancoppas  
 Cash-Acme  
 Cashco Canada  
 Cashco Canada  
 Cellex  
 Century Valve  
 Century Valve  
 Chandler  
 Chemtrol  
 Chessell  
 Clarkson  
 Cliff Mock  
 Codel  
 Colder  
 Collins Instrument Company  
 Compressor Controls Corporation  
 Computer Keyboard Systems (CKS)  
 Conant Controls  
 Condens  
 Conoflow  
 Consolidated  
 Consolidated Controls  
 Consolidated Controls

**Local Sales Representative**

Transcat  
 Controls Ovantum Sales Inc.  
 Transcat  
 Willer Engineering  
 Lisle-Metrix Ltd.  
 Romatec  
 Brian Controls  
 SSCAN-Grodyne  
 Transcat  
 J & M Industrial Supply  
 Lakeside Controls  
 Davis Controls  
 Sharp Valve & Instrumentation  
 Transcat  
 Conval Equipment  
 Transcat  
 Controls  
 Transcat  
 Conval Equipment  
 Romatec  
 SSCAN-Grodyne  
 Transcat  
 PMP Instrumentation  
 Transcat  
 Transcat  
 Transcat  
 Brian Controls  
 Willer Engineering  
 Transcat  
 Brian Controls  
 Transcat  
 PMP Instrumentation  
 Ovantum Sales Inc.  
 Provincial Controls  
 Huron Valve & Fittings  
 Davis Controls  
 G.L. Stebbins  
 PMP Instrumentation  
 Westburne Lytle  
 Cambridge Controls  
 Provincial Controls  
 PMP Instrumentation  
 Brian Controls  
 PMP Instrumentation  
 Transcat  
 U & I Supply  
 Willer Engineering  
 Controls  
 Westburne Lytle  
 Westech  
 Davis Controls  
 Sharp Valve & Instrumentation  
 SSCAN-Grodyne  
 CB Engineering  
 Industrial Projects  
 Transcat  
 Sarnia Piping Specialties  
 Sharp Valve & Instrumentation  
 Technel Engineering  
 Transcat

**Manufacturer / Tradename**

Contaq  
Control Instruments Corp.  
Control Microsystems  
Cooper Instruments  
Cosense  
Crosby Safety Valves  
Custom Control Sensors  
Cybex  
DGH  
DH Instruments  
DSP Technology  
Danfoss  
Danfoss Mfg. Co. Ltd. - Denmark  
Daniel  
Darmatt  
Data Industrial  
Data Instruments Inc. - USA  
Data Lynx  
Data Precision  
Datatest  
Datavuc  
Datel  
Davis Controls Ltd.  
Davis Instruments  
Defelsko  
Dekoron  
Delphian  
Delta C Technologies  
Delta-P Cell  
Deltapilot  
Descote  
Detector Electronics  
Devar  
Dianachart  
Dickson  
Digitec  
Dopak  
Dover Gas Technologies  
Drager  
Dresser  
Druck  
Druck  
Durakool  
Durco  
Duro-Sense  
Dwyer  
Dwyer  
Dwyer  
Dynapar  
Dynapar  
E. G. & G. Moisture & Humidity  
ECD  
ECD  
ECS Control Techniques  
EG & G Flow Technology Inc.  
EIT Inc.  
ELREMCO Timers - England  
EMCO  
ERHARD Valves  
ETC

**Local Sales Representative**

Ovantum Sales Inc.  
Willer Engineering  
Brian Controls  
Transcat  
SRP controls  
Lakeside Controls  
Willer Engineering  
CB Engineering  
Alpha Controls & Instrumentation  
SRP controls  
SRP controls  
Davis Controls  
Lisle-Metrix Ltd.  
Cantrols  
Bestobell Canada  
Cambridge Controls  
Technel  
SSCAN-Grodyne  
Transcat  
Novatech  
Leeds & Northrup, Canada  
Transcat  
PMP Instrumentation  
Transcat  
Transcat  
Bestobell Canada  
Romatec  
Veronics  
Moore Products Company  
Endress & Hauser  
Sharp Valve & Instrumentation  
CB Engineering  
Cantech Controls  
Alpha Controls & Instrumentation  
Transcat  
Brian Controls  
Westburne Lytle  
Veronics  
Westech  
Sharp Valve & Instrumentation  
SRP controls  
Transcat  
Davis Controls  
Cantrols  
Transcat  
Baker Instruments Ltd.  
Davis Controls  
Transcat  
Davis Controls  
J & M Industrial Supply  
Vermeer Engineering  
Novatech  
Transcat  
Vermeer Engineering  
CB Engineering  
Vermeer Engineering  
Lisle-Metrix Ltd.  
Davis Controls  
Lisle-Metrix Ltd.  
Transcat

**Manufacturer / Tradename**

Eagle Signal  
Eaton Consolidated Controls - USA  
Echotel  
El-O-Matic  
Elcon Instruments  
Encoder  
Endress+Hauser  
Enertrol Shocks  
Enertrols  
Environics  
Environmental Technologies Group Inc.  
Environnement S.A.  
Epic Samplers  
Erdco  
Euchner  
Exac  
Expo Safety Systems  
Extech Instruments  
F.B. Leopold - USA  
F.W. Bell  
F.W. Murphy  
Fabco Air  
Fielding Crossman  
Fike Canada Inc.  
Firerod Cartridge Heaters  
Fischer & Porter - Rotameters  
Fisher Controls  
Fisher Research  
Fisons Instruments  
Flow Meter Co. - England  
Flowtek Valves  
Fluid Data/Amcor  
Fluidic  
Fluke  
Fluke Electronics  
Foxboro Analytical Group  
Fulier  
Furon Unitherm  
G.C. Industries  
G.S.I.  
GGOSCO Engineering  
GGOSCO Needle Valves  
GH Flow Automation  
GLA Elettronica  
GO Proximity Switches  
GO Regulators  
GP:50 New York Ltd.  
Galtek  
Gamma Silometer  
Gefran  
Genelco  
General Eastern  
General Monitors  
General Resistance  
Global  
Gralab  
H. O. Trerice  
H.D. Baumann Control Valves  
Haenni Instruments  
Hammel Dahl

**Local Sales Representative**

Davis Controls  
Technel  
Provincial Controls  
Westburne Lytle  
SRP controls  
elenex Ltd.  
Davis Controls  
Provincial Controls  
elenex Ltd.  
Brian Controls  
Novatech  
SSCAN-Grodyne  
PMP Instrumentation  
Bestobell Canada  
Davis Controls  
Lakeside Controls  
Syber Systems Inc.  
Novatech  
Lisle-Metrix Ltd.  
Transcat  
Cantech Controls  
Davis Controls  
Lisle-Metrix Ltd.  
Brian Controls  
Zesta Engineering  
TubeTech  
Lakeside Controls  
Transcat  
Westech  
Lisle-Metrix Ltd.  
Provincial Controls  
Armatek Controls  
Brian Controls  
Transcat  
Armatek Controls  
Vermeer Engineering  
Syber Systems Inc.  
Bestobell Canada  
Brian Controls  
Sarnia Piping Specialties  
Provincial Controls  
Westburne Lytle  
Ovantum Sales Inc.  
SRP controls  
Lakeside Controls  
Sarnia Piping Specialties  
SRP controls  
Romatec  
Endress & Hauser  
SRP controls  
Willer Engineering  
Willer Engineering  
Armatek Controls  
Transcat  
Transcat  
Transcat  
U & I Supply  
Conval Equipment  
J & M Industrial Supply  
Neles-Jamesbury

**Manufacturer / Tradename**

Hansen Quik Connects  
 Hartman-Technica  
 Heise  
 Heraeus Sensors  
 Hewlett Packard  
 Hiltcroft  
 Hitachi - Oscilloscopes  
 Hoffer Flow Controls - USA  
 Honeywell  
 Honeywell - Controllers & Recorders  
 Honeywell - Controllers & Recorders  
 Honeywell - Recorders  
 Honeywell - Recorders  
 Horiba  
 Hoskins  
 Huntron  
 Hy-Cal  
 Hydril  
 Hygrolog  
 IBM Industrial  
 IC Sensors  
 IDEC  
 IET  
 ITT Barton Instruments  
 ITT Dialflow  
 ITT Neo Dyn  
 IVO Industries - USA  
 Illinois Instruments  
 Imperial Eastman  
 Imperial Eastman  
 Imperial Eastman  
 Industrial Control Services  
 Industrial Scientific Corporation  
 Ingold  
 Inicon  
 Inor  
 Intecolor  
 Intelligent Controls  
 Intellitron  
 Intellution  
 Interface  
 Interlink  
 International Sensor  
 Interscan  
 Intertec  
 Ionics Instrument Division  
 Ircan  
 Ishida  
 J-Tec  
 JB Engineering  
 Jacoby Tarbox  
 Jamesbury  
 Jensen  
 Jofra  
 Jofra  
 Johnson Yokogawa  
 Jordan Controls  
 Joucomatic International  
 Jucker  
 Julius Bauser - Germany

**Local Sales Representative**

Provincial Controls  
 Transcat  
 Transcat  
 SRP controls  
 Transcat  
 Syber Systems Inc.  
 Transcat  
 Lisle-Metrix Ltd.  
 Davis Controls  
 Brian Controls  
 Cantech Controls  
 Provincial Controls  
 Transcat  
 SSCAN-Grodyne  
 Cantech Controls  
 Transcat  
 Davis Controls  
 Cantech Controls  
 Endress & Hauser  
 CB Engineering  
 SRP controls  
 elenex Ltd.  
 Transcat  
 Armatek Controls  
 Romatec  
 CB Engineering  
 Lisle-Metrix Ltd.  
 Veronics  
 Provincial Controls  
 U & I Supply  
 elenex Ltd.  
 Armatek Controls  
 SSCAN-Grodyne  
 Westech  
 Cantech Controls  
 Alpha Controls & Instrumentation  
 CB Engineering  
 SRP controls  
 Cantech Controls  
 CB Engineering  
 Willer Engineering  
 Vermeer Engineering  
 TechnologyIndustrial Projects  
 SSCAN-Grodyne  
 Tubetech  
 Veronics  
 Willer Engineering  
 Atlas Alloys  
 Romatec  
 Transcat  
 Romatec  
 Atlas Alloys  
 Transcat  
 Brian Controls  
 Transcat  
 CB Engineering  
 Cambridge Controls  
 Conval Equipment  
 Bestobell Canada  
 Lisle-Metrix Ltd.

**Manufacturer / Tradename**

K-Flow  
 K-Tek  
 K-Tek  
 KNF Neuberger  
 KTM  
 Kammer Control Valves  
 Kammer Control Valves  
 Kane-May  
 Kates  
 Kay Ray/Sensal  
 Kaye  
 Kaye Instruments  
 Kedco Mfg Ltd.  
 Kenwood USA  
 Ketema - McCrometer  
 Ketema - Schutte & Koerting  
 Kinetics Systems Corp. - USA  
 Kinetrol  
 King Instrument  
 Kisler-Morse  
 Kitz  
 Kitz  
 Klinger  
 Klockner Moeller  
 Kotron  
 Kurz  
 Kurz  
 Kurz  
 L & J Technologies  
 LAGCO Flumes - USA  
 LEOPOLD  
 LFE Instruments - USA  
 LMI  
 LMI  
 Land  
 Larad  
 Leader  
 Leaderline  
 Leaderline  
 Lear Siegler  
 Lee-Dickens Ltd. - England  
 Leeds & Northrup  
 Legris  
 Legris Fittings  
 Letco  
 Lewis  
 Love  
 Lumenite  
 M and Y Valve Services  
 M point  
 M-System  
 M-Tek  
 MCF Ball Valves  
 MKS  
 MST  
 MTL  
 MTL IS Barriers  
 MTS  
 Madison  
 Magnetrol

**Local Sales Representative**

Willer Engineering  
 CB Engineering  
 J & M Industrial Supply  
 Transcat  
 Associated Valve  
 Bestobell Canada  
 Cantrols  
 Transcat  
 Westech  
 Rosemount Instruments  
 Transcat  
 CB Engineering  
 U & I Supply  
 Transcat  
 Brian Controls  
 Brian Controls  
 Technel  
 Provincial Controls  
 Industrial Projects  
 Novatech  
 Atlas Alloys  
 Cantrols  
 Davis Controls  
 elenex Ltd.  
 Provincial Controls  
 Brian Controls  
 SSCAN-Grodyne  
 Transcat  
 Armatek Controls  
 Lisle-Metrix Ltd.  
 Lisle-Metrix Ltd.  
 Lisle-Metrix Ltd.  
 Novatech  
 U & I Supply  
 Transcat  
 Syber Systems Inc.  
 Transcat  
 Brian Controls  
 Honeywell  
 Romatec  
 Lisle-Metrix Ltd.  
 Sarnia Piping Specialties  
 elenex Ltd.  
 Provincial Controls  
 PMP Instrumentation  
 Transcat  
 Davis Controls  
 Bestobell Canada  
 Ovantum Sales Inc.  
 Endress & Hauser  
 SRP controls  
 Transcat  
 Lakeside Controls  
 Transcat  
 Brian Controls  
 Syber Systems Inc.  
 Provincial Controls  
 Novatech  
 Bestobell Canada  
 Provincial Controls



**Manufacturer / Tradename**

Major  
 Manobourdon  
 Marpac  
 Marsh  
 Martel  
 Masoneilan  
 Max  
 Max 1000  
 Mead  
 Meeco Inc.  
 Mercoid  
 Meriam Instruments  
 Metricor  
 Metrix  
 Metrix Timers  
 Metrosonics  
 Micon  
 Micro Motion  
 Micro Movements  
 Micromax 2  
 Micronics Ltd.  
 Mid-West Instrument  
 Mikron  
 Milton Roy - Liquid Metronics Division  
 Mini-X Purge Systems  
 Mini-Z Purge Systems  
 Mitsubishi  
 Mobrey  
 Modulevel  
 Monarch  
 Monitek  
 Monitor  
 Monitor Labs  
 Moore Industries  
 Moore Products Pressure Regulators  
 Multi-Amp  
 Multi-Volt  
 Multitrode  
 Mycro  
 Myron L.  
 NBS  
 NGI  
 Nassau Instrument  
 Negretti  
 Neles  
 Neles-Jamesbury  
 Neles-Jamesbury  
 Neutronics  
 Newman Hattersly  
 Nicholson  
 Nilcor  
 Nivosonic  
 Nohken  
 Norstat  
 Novalynx  
 Nullmatic  
 Numatics  
 Numatics  
 Nupro Valves  
 O'Brien

**Local Sales Representative**

Alpha Controls & Instrumentation  
 Sarnia Piping Specialties  
 Sharp Valve & Instrumentation  
 TubeTech  
 Transcat  
 Sharp Valve & Instrumentation  
 Willer Engineering  
 Leeds & Northrup, Canada  
 Transcat  
 Novatech  
 Davis Controls  
 Transcat  
 Willer Engineering  
 Transcat  
 Lisle-Metrix Ltd.  
 Brian Controls  
 Cantech Controls  
 Rosemount Instruments  
 SRP controls  
 Leeds & Northrup, Canada  
 Veronics  
 Brian Controls  
 Transcat  
 U & I Supply  
 Syber Systems Inc.  
 Syber Systems Inc.  
 Davis Controls  
 Bestobell Canada  
 Provincial Controls  
 Transcat  
 Willer Engineering  
 Romatec  
 Brian Controls  
 Armatek Controls  
 Transcat  
 Transcat  
 Transcat  
 Bestobell Canada  
 Moore Products Company  
 Transcat  
 Transcat  
 Transcat  
 Bestobell Canada  
 Atlas Alloys  
 Atlas Alloys  
 Ovantum Sales Inc.  
 Transcat  
 Bestobell Canada  
 Romatec  
 Sharp Valve & Instrumentation  
 Endress & Hauser  
 Bestobell Canada  
 Davis Controls  
 Brian Controls  
 Moore Products Company  
 Provincial Controls  
 elenex Ltd.  
 Huron Valve & Fittings  
 Armatek Controls

**Manufacturer / Tradename****Local Sales Representative**

OMNI  
Oakton  
Ogontz  
Ohmart  
Oilgear  
Oliver Valves  
Omron  
Orange Research  
Orion  
P+F - USA  
PMV  
PTC  
PTC  
Pacer Industries  
Pacific Instruments  
Pamark Manifolds  
Panalarm  
Panalarm  
Panametrics PCI Division  
Parker  
Pelican  
Penberthy  
Penberthy  
Pepperl + Fuchs - USA  
Permacal  
Phipps & Bird  
Phoenix Contact  
Polysonics  
Polytronics  
Porter Instrument Co. - USA  
Posiseal  
Powers Process Control  
Precision Digital  
Preferred Rimcor Inc.  
Preso  
Presto-Tek  
Pribusin  
Pribusin Inc.  
Promac  
Prominent  
Proquip  
Provincial Instrument Housings  
Provovx  
Proximity  
Proximity Control  
Psytronics  
Pulsafeeder  
Pyramid  
QEL  
QSDM  
QSDM  
Quad Tech  
Qualimetrics  
Quantum  
RCM Industries  
REXA  
RGS  
RIS  
RMS Instruments  
Ralston

Westech  
Transcat  
Cantech Controls  
G.L. Stebbins  
Bestobell Canada  
Sarnia Piping Specialties  
elenex Ltd.  
Provincial Controls  
Transcat  
Lisle-Metrix Ltd.  
Romatec  
Brian Controls  
Transcat  
Transcat  
SRP controls  
Provincial Controls  
Cambridge Controls  
Willer Engineering  
Veronics  
TubeTech  
Transcat  
Brian Controls  
Westburne Lytle  
Lisle-Metrix Ltd.  
Provincial Controls  
Transcat  
elenex Ltd.  
Davis Controls  
Transcat  
Lisle-Metrix Ltd.  
Lakeside Controls  
Conval Equipment  
Armatek Controls  
Vermeer Engineering  
Willer Engineering  
SRP controls  
Provincial Controls  
Novatech  
Transcat  
Ovantum Sales Inc.  
PMP Instrumentation  
Provincial Controls  
Lakeside Controls  
Bestobell Canada  
Provincial Controls  
Cambridge Controls  
Romatec  
Romatec  
TubeTech  
Alpha Controls & Instrumentation  
Willer Engineering  
Transcat  
Transcat  
Transcat  
Cambridge Controls  
Controls  
Syber Systems Inc.  
Transcat  
Technel Engineering  
Transcat

**Manufacturer / Tradename**

Ralston  
Raytek  
RdF  
Research Control Valves  
Rexcon  
Robbins Myers  
Robertshaw  
Rochester Instrument Systems  
Rohrback Cosasco Systems  
Ronan  
Rosemount  
Rosemount Analytical  
Rosemount Analytical  
Rosemount Combustion Control  
Rotomation  
Rotronic  
Royce Instruments  
Rupture Pin Technology  
Ruska Instrument Corp. - USA  
Rustrak  
S.P.S. Instrument Services  
SAFFTRIP I.S.  
SOR  
SPM  
STI  
Sample Technologies Inc. (STI)  
Sarasota Automation  
Sarasota Measurement & Controls  
Scanivalve Corporation - USA  
Schlumberger  
Schlumberger  
Schradler Bellows  
Schramm  
Scully Electronic Systems  
Seacor  
Sealed Unit Parts  
Sensall  
Sensidyne  
Sensidyne Gas Monitors  
Servomex  
Setra  
Shand & Jurs  
Shawflex  
Shimpo  
Sieger  
Siemens  
Siemens  
Sierra Monitor  
Sigma Technologies  
Signet Scientific  
Sigrist-Photometer Co. - Switzerland  
Silometer  
Simpson  
Skinner  
Smar  
Smartline  
Smartline  
Smith Valve  
Sno-Trik  
Solomat

**Local Sales Representative**

elenex Ltd.  
Transcat  
Willer Engineering  
Lakeside Controls  
elenex Ltd.  
U & I Supply  
PMP Instrumentation  
Sharp Valve & Instrumentation  
Armatek Controls  
Industrial Projects  
Rosemount Instruments  
Rosemount Instruments  
Transcat  
Romatec  
elenex Ltd.  
Alpha Controls & Instrumentation  
PMP Instrumentation  
Westech  
Technel  
Transcat  
Sarnia Piping Specialties  
Lisle-Metrix Ltd.  
Industrial Projects  
Transcat  
elenex Ltd.  
CB Engineering  
Sharp Valve & Instrumentation  
SRP controls  
Technel Engineering  
Sarnia Piping Specialties  
Westech  
TubeTech  
Sharp Valve & Instrumentation  
SRP controls  
Transcat  
Transcat  
Alpha Controls & Instrumentation  
Novatech  
Transcat  
Novatech  
Alpha Controls & Instrumentation  
Westburne Lytle  
Bestobell Canada  
Transcat  
SSCAN-Grodyne  
Alpha Controls & Instrumentation  
elenex Ltd.  
Transcat  
Sarnia Piping Specialties  
Brian Controls  
Lisle-Metrix Ltd.  
Endress & Hauser  
Transcat  
Cantech Controls  
G.L. Stebbins  
Brian Controls  
Honeywell  
Atlas Alloys  
Huron Valve & Fittings  
Transcat

**Manufacturer / Tradename**

Sparling  
 Speedomax  
 Stahl  
 Statham  
 Statiflow  
 Stewart Electronics  
 Strahman  
 Sugino  
 Superior Flow Products  
 Swagelok Tube Fittings  
 Swingwirl  
 Synchro  
 Systematix  
 T.B. Woods  
 TDC-3000  
 TIF  
 TLV  
 TOWER-GARD  
 TSI  
 Taylor Hand Actuated Pressure Calibrator  
 Techmation  
 Techné  
 Technipower  
 Tegam  
 Tegam  
 Tektronix  
 Tel-Tru  
 Tel-Tru  
 Teledyne  
 Teledyne Combustion Efficiency Analyzer  
 Telematic  
 Telemecanique  
 Teltronics  
 Testoterm  
 Texas Analytical Controls Inc.  
 Texas Sampling Inc.  
 The Electron Machine Corporation  
 Theben  
 Thermo Electric  
 Thermo Electric - Calibrators  
 Thermo Kinetics  
 ThermoElectric  
 Thermon  
 Thermox  
 Time  
 Tobar  
 Tokheim  
 Trademark  
 Transmation  
 Transmation  
 Transtector Systems  
 Trerice  
 Tri-Sen  
 Tricentric  
 Tripp-Lite  
 Trueline Valves  
 Tytronics Inc.  
 U.S. Gauge  
 U.S. Gauge  
 Unimeasure

**Local Sales Representative**

Brian Controls  
 Leeds & Northrup, Canada  
 Alpha Controls & Instrumentation  
 Sarnia Piping Specialties  
 Westburne Lytle  
 SRP controls  
 Cantech Controls  
 elenex Ltd.  
 Ovantium Sales Inc.  
 Huron Valve & Fittings  
 Endress & Hauser  
 Moore Products Company  
 Willer Engineering  
 elenex Ltd.  
 Honeywell  
 Transcat  
 TubeTech  
 Lisle-Metrix Ltd.  
 Willer Engineering  
 Transcat  
 Lakeside Controls  
 Transcat  
 Transcat  
 Brian Controls  
 Transcat  
 Transcat  
 Brian Controls  
 Transcat  
 Armatek Controls  
 Transcat  
 Willer Engineering  
 elenex Ltd.  
 Cantech Controls  
 Transcat  
 Vermeer Engineering  
 Bestobell Canada  
 Industrial Projects  
 Davis Controls  
 Armatek Controls  
 Transcat  
 Provincial Controls  
 TubeTech  
 PMP Instrumentation  
 Willer Engineering  
 ElectronicsTranscat  
 Cantech Controls  
 Willer Engineering  
 G.L. Stebbins  
 Controls  
 Transcat  
 Cantech Controls  
 U & I Supply  
 CB Engineering  
 Bestobell Canada  
 Transcat  
 Conval Equipment  
 Novatech  
 Brian Controls  
 Transcat  
 SRP controls

**Manufacturer / Tradename**

United Electric  
United Electric  
United Sciences Inc.  
Unitherm  
Universal  
Universal Enterprises  
Unomat  
Unomat  
Vaccon Vacuum  
Vaisala  
Valhalla  
Valtek  
Valvtech  
Vanessa  
Varec  
Variomag  
Vector-Vid  
Velan  
Versatile Measuring Instruments  
Vertigage  
Viatran  
Vista Scientific  
Vitec  
Viz  
W.E. Anderson  
WHIPPS Inc. - USA  
Walker Scientific  
Wallace & Tiernan  
Wallace & Tiernan - Pressure Calibrators  
Waltron  
Warren Jones Engineering - England  
Warrick  
Waterman Industries - USA  
Waugh  
Weksler Instruments  
Welker Engineering  
West  
Westech  
Westlock Controls  
Whesso Varec  
Whitey Valves  
Whitman  
Wika  
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Winters Gauges  
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Wood's  
Worcester Controls  
Y-Z Industries  
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**Local Sales Representative**

Brian Controls  
Cambridge Controls  
Willer Engineering  
Bestobell Canada  
Alpha Controls & Instrumentation  
Transcat  
SRP controls  
Transcat  
Provincial Controls  
Transcat  
Transcat  
Cantrols  
Cantrols  
Westburne Lytle  
Westech  
Endress & Hauser  
Transcat  
Westburne Lytle  
SRP controls  
Moore Products Company  
Willer Engineering  
Transcat  
Transcat  
Transcat  
Cantech Controls  
Lisle-Metrix Ltd.  
Transcat  
J & M Industrial Supply  
Transcat  
Novatech  
Lisle-Metrix Ltd.  
Davis Controls  
Lisle-Metrix Ltd.  
Alpha Controls & Instrumentation  
Baker Instruments Ltd.  
SSCAN-Grodyne  
Alpha Controls & Instrumentation  
Westech  
Atlas Alloys  
Westech  
Huron Valve & Fittings  
Davis Controls  
Sharp Valve & Instrumentation  
Transcat  
Provincial Controls  
Alpha Controls & Instrumentation  
U & I Supply  
U & I Supply  
Westech  
Transcat  
Bestobell Canada

- *Notes* -

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1948/49	Ron Chamberlane	1971/72	Curt McDonald
1949/50	Don Livingstone	1972/73	Everett Maness
1950/51		1973/74	Stan Thrift
1951/52	Ken Goldring	1974/75	E.A. Comello
1952/53	Amby UpFold	1975/76	Bernard West
1953/54	Warren McKay	1976/77	Jim Henrikson
1954/55	Jack Heatley	1977/78	Jim Johnson
1955/56	Larry Hall	1978/79	Ron Thurier
1956/57	Harold Kohlmeier	1979/80	Dave Braedley
1957/58	Ron Asselstine	1980/81	John Stassen
1958/59	Mike Hicks	1981/82	Wayne Jamieson
1959/60	Mike Hicks	1982/83	Frank Bandura
1960/61	Mike Hicks	1983/84	John Tranter
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1962/63	Robert Brayne	1985/86	Ron Kells
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