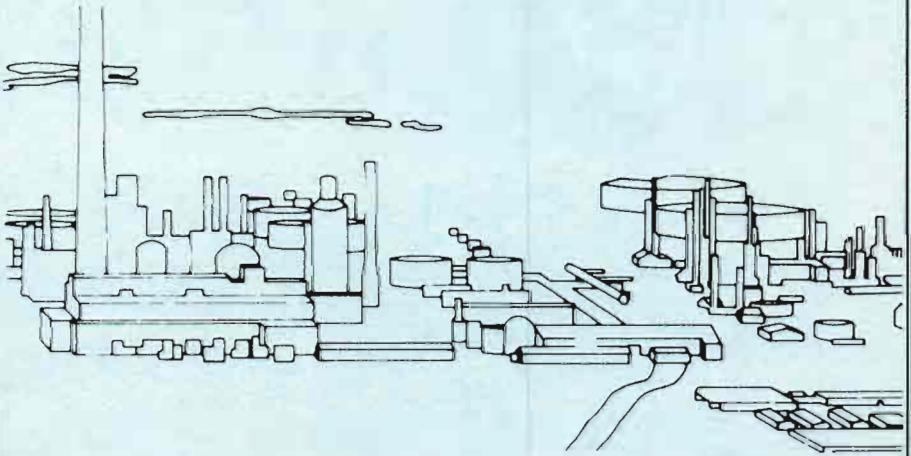




SARNIA SECTION

P.O. BOX 206  
SARNIA, ONT.  
N7T 7H9

# ANNUNCIATOR



MEETING AT THE SARNIA GOLF & CURLING CLUB  
500 ERROL ROAD, WEST

# ISA Executive 1988/89

Executive Position	Name	Mailing Address
PRESIDENT	Irwin Hawkes	Esso Chemical Canada P.O. Box 3004, Sarnia, Ont., N7T 7M5 / 339-2257
VICE-PRESIDENT	Rich Paterson	Provincial Controls, P.O. Box 2946, Sarnia, Ont., N7T 7L1 / 336-7301
SECRETARY	Dave Wheatley	Willer Engineering Ltd., P.O. Box 2866, Sarnia, Ont., N7T 7W1 / 336-3006
TREASURER	Subhash Khimdas	Esso Chemical Canada P.O. Box 3004, Sarnia, Ont., N7T 7M5 / 339-2212
EDUCATION CHAIRMAN	Ken Blair	CIL Inc., P.O. Box 1900, Courtright, Ont., N0N 1H0 / 867-2739, Ext. 395
EDUCATION ASSISTANT	Ron Kells	Dow Chemical Canada Inc. P.O. Box 3030, Sarnia, Ont., N7T 7M1 / 339-3428
HONOR AWARDS & PUBLICITY	Harry Dawson	44 Cardinal Lane, Camlachie, Ont., N0N 1E0 / 869-4577
STUDENT SECTION LIASON	Art Teasell	Lambton College, 1457 London Rd., Sarnia, Ont., N7T 7K4 / 542-7751
ASSISTANT FACULTY ADVISOR	Brian Aitken	Lambton College, 1457 London Rd., Sarnia, Ont., N7T 7K4 / 542-7751
DELEGATE PAST PRESIDENT	Joe Lobo	Dow Chemical Canada Inc., P.O. Box 3030, Sarnia, Ont., N7T 7M1 339-3011
ALTERNATE DELEGATE	Howie Whitton	Polysar Limited, P.O. Box 3001, Sarnia, Ont., N7T 7M2 / 337-8251, Ext. 502
MEMBERSHIP CHAIRMAN	Doug Carter	Foxboro Canada Inc., 1355 Confederation St., Unit 4, Sarnia, Ont. N7S 4T2 / 339-9772
MEMBERSHIP ASSISTANT	Jim Lomax	Esso Petroleum, P.O. Box 3022, N7T 7M1 / 339-4889
PROGRAM CHAIRMAN	Phil Luppke	S.P.S., 510 Williams Dr., Sarnia, Ont., N7T 7L1 / 336-8820
PROGRAM ASSISTANT	Ian Shouldice	Jamesbury Canada, P.O. Box 352, Sarnia, Ont., N7T 7J2 / 336-3025
NEWSLETTER CHAIRMAN	Mike Whitton	Farris Ind., P.O. Box 2776, Sarnia, Ont., N7T 7W1 / 332-0141
NEWSLETTER ASSISTANT	Frank Baugh	Polysar Limited, P.O. Box 3001, Sarnia, Ont. / N7T 7M2 337-8251 Ext. 8353
STANDARDS & PRACTICES & ANNUAL REPORT	John Tranter	Polysar Limited, P.O. Box 3001 Sarnia, Ont., N7T 7M2 337-8251, Ext. 414

Executive Meeting Dates : December 19th    February 27th    April 17th  
 Place : Drawbridge Inn, Sarnia in Somerset Room  
 Time : 7:00 P.M.  
 Membership Dinner Dates : November 28th    January 23rd    March 20th    June 5th  
 Place : Sarnia Golf & Country Club  
 Time : Social Hour: 6:00 p.m. / Dinner: 7:00 p.m. / Speaker: 8:00 p.m.

## List of Advertisers

Company	Page No.	Company	Page No.
ABB Kent Inc. ....	14	Milton Roy Industries Ltd. ....	34
Alpha Controls & Inst. ....	29	Moore Instruments Ltd. ....	28
Armatek Controls Ltd. ....	21	Neles Canada Inc. ....	28
Atlas Alloys ....	32	Norspec Controls ....	31
BMH Industries Inc. ....	30	Ontor Ltd. ....	14
Bailey Controls ....	43	P.F. Vermeer Ltd. ....	28
Baker Instruments Ltd. ....	13	P.I.D. Instruments ....	2
Bestobell Canada Limited ....	24	PMP Instrumentation Ltd. ....	21
Brian Controls ....	15	Peacock Inc. ....	12
Brooks Instrument Division ....	27	Process Equipment & Control News ....	35
C.B. Engineering Ltd. ....	42	Provincial Controls ....	16
CD Nova Tech Inc. ....	25	R.A. Kirby Sales Inc. ....	29
Cambridge Control ....	25	Raychem Canada Limited ....	34
Cancoppas Ltd. ....	31	Romatec ....	44
Cantech Controls Division ....	38	Ronan Engineering Ltd. ....	39
Controls Equipment Ltd. ....	17	Rosemount Instruments Ltd. ....	22
Combustion Engineering ....	20	SRP control systems ltd. ....	44
Conval Equipment ....	25	SSCAN Instruments ....	35
Davis Controls Ltd. ....	33	Sarnia Piping Spec. Ltd. ....	26
Delta Enterprises Ltd. ....	17	Sharp Valve & Inst. Ltd. ....	43
Durham Instruments ....	26	Simark Controls Limited ....	24
Farris Industries Canada ....	10	T.J. McCarthy Ltd. ....	13
Fischer & Porter Ltd. ....	1	Technel Engineering Ltd. ....	29
Floval Equipment Ltd. ....	38	ThermoElectric (Canada) ....	13
Foxboro Canada Inc. ....	12	Thermon Canada Ltd. ....	37
G.L. Stebbins Co. (1982) Ltd. ....	14	Troy Control Systems Inc. ....	34
Grodyne Controls Ltd. ....	36	Truline Valve Co. Ltd. ....	41
Hex Valve ....	11	Tubetech Ltd. ....	40
Hoke Controls Ltd. ....	35	United Electric Controls ....	18
Honeywell ....	13	Utility & Industrial Supply Ltd. ....	19
Huron Valve & Fitting Ltd. ....	15	Valley Process Spec. ....	41
Industrial Projects Ltd. ....	17	Veronics Inc. ....	16
Jordan Valve ....	21	Westburne Lytle ....	40
LTS Sales Ltd. ....	11	Westtech Instruments Ltd. ....	9
Lakeside Controls ....	18	Westinghouse Canada Inc. ....	32
Leeds & Northrup, Canada ....	11	Willer Engineering Ltd. ....	33
Magnetrol International Ltd. ....	21		
		Local Chapter News ....	21,22,23,24
		Users Directory ....	3,4,5,6

A comprehensive line of process control  
and monitoring instruments

Fischer & Porter (Canada) Ltd.  
134 Northinch Drive  
Downsview, Ont. M3N 1X7  
(416) 667-9800

FISCHER  
& PORTER 

# PID Instruments

div of R.H. NICHOLS CO. LTD.

<b>Temperature</b>	Portable Digital Temperature Meter "TEMPMASTER" Precision Bench Type Digital Temperature Meter for T/C or RTD input, Panel Mount Pyrometers. Heat Flow Meters, Heat Insulation Testers Thermal Conductivity Meters Precision Surface Thermocouples Thermocouples and RTD's Pressure and Vacuum Sealing Glands Temp. Controls, DIN size accepting T/C or RTD input for ON-OFF proportioning thru to full PID Control, including self-tuning and SCR Power Controls.
<b>Process Control</b>	YEW Series 80 a line of Microprocessor-based Process Control Instruments, fully programmable CRT based distributed control systems Micro-Computer Systems, turn-key, all software handled by R.H. Nichols.
<b>Recorders</b>	Strip Chart 100mm to 250mm Single-pen, multi-pen and Multipoint Microprocessor-based Recorders Intelligent Process Recorders Portable GP Recorders Digital Multipoint Recorders
<b>Data Acquisition</b>	Kaye Data Acquisition System Intelligent Data Loggers starting at 16 pts and up, offering Math pack, alarms, fully programmable by user, with RS-232 communications.
<b>Flow Meters</b>	YEW Vortex Shedding and MAG flow meters capable of handling Liquid, Gas or Steam at process temperatures up to 400°C/752°F available in sizes from 1" to 8".
<b>Flow Totalizers</b>	YEW YFCT Field Mounted Computing Totalizer, capable of accepting compensating input for mass flow calculation.
<b>Analyzers</b>	YEW O <sub>2</sub> Analyzer for combustion control, direct insertion type offering improved reliability with less maintenance YEW in-situ Humidity Analyzer for measuring water vapour in hot gases up to 600°C EG&G Humidity Analyzers, high accuracy chilled Mirror Hygrometers for Dew Point measurement Sulphur-in-oil Analyzers Pocket pH and conductivity Meters.
<b>Density</b>	YEW Vibration Type Liquid Density Meter Process Refractometer for continuous in-line measurement of dissolved solids.
<b>Metermaster div.</b>	A complete line of Test Measuring and Recording Instrumentation Panel and Switchboard Instruments including Analog & Digital Panel Meters and Bargraph displays.

Phone: (519) 542-1201 (Toronto Phone: (416) 851-8871)  
80 Vinyl Court, Woodbridge, Ontario L4L 4A3

Telex: 06-964576  
FAX: 651-6862

**ACTUATORS**

Brian Controls  
Cambridge Control  
Cancoppas Ltd.  
Cantrols Equipment Ltd.  
Foxboro Canada Inc.  
Leeds & Northrup, Canada  
Milton Roy Industries Ltd.  
Moore Instruments Ltd.  
Provincial Controls  
Romatec  
Sarnia Piping Spec. Ltd.  
Sharp Valve & Inst. Ltd.  
Tubetech Ltd.  
Valley Process Spec.

**ALARM SYSTEMS**

Brian Controls  
C.B. Engineering Ltd.  
CD Nova Tech Inc.  
Cambridge Control  
Cancoppas Ltd.  
Cantech Controls Division  
Cantrols Equipment Ltd.  
Foxboro Canada Inc.  
Grodyne Controls Limited  
Industrial Projects Ltd.  
Norspec Controls  
R.A. Kirby Sales Inc.  
Romatec  
Ronan Engineering Ltd.  
Rosemount Instruments Ltd.  
SRP control systems Ltd.  
Simark Controls Limited  
Valley Process Spec.  
Willer Engineering Ltd.

**ANALYZERS**

Alpha Controls & Inst.  
Brian Controls  
CD Nova Tech Inc.  
Cancoppas Ltd.  
Foxboro Canada Inc.  
Grodyne Controls Limited  
Industrial Projects Ltd.  
Leeds & Northrup, Canada  
Norspec Controls  
R.A. Kirby Sales Inc.  
Romatec  
Rosemount Instruments Ltd.  
SRP control systems Ltd.  
SSCAN Instruments  
Westech Instruments Ltd.  
Willer Engineering Ltd.

**BARRIERS**

Alpha Controls & Inst.  
Industrial Projects Ltd.  
Norspec Controls

Provincial Controls  
Ronan Engineering Ltd.  
SRP control systems Ltd.  
Sharp Valve & Inst. Ltd.

**CALIBRATION**

Alpha Controls & Inst.  
Brian Controls  
Brooks  
CD Nova Tech Inc.  
Cancoppas Ltd.  
Cantrols Equipment Ltd.  
Grodyne Controls Limited  
Industrial Projects Ltd.  
Norspec Controls  
Ronan Engineering Ltd.  
Rosemount Instruments Ltd.  
SRP control systems Ltd.  
SSCAN Instruments  
Sarnia Piping Spec. Ltd.  
Sharp Valve & Inst. Ltd.  
Technel Engineering Ltd.  
ThermoElectric (Canada)  
Tubetech Ltd.  
Willer Engineering Ltd.

**CHART PAPER**

Leeds & Northrup, Canada  
Technel Engineering Ltd.  
Willer Engineering Ltd.

**CONTROL SYSTEMS**

Alpha Controls & Inst.  
Baker Instruments Ltd.  
Brian Controls  
C.B. Engineering Ltd.  
CD Nova Tech Inc.  
Cambridge Control  
Cancoppas Ltd.  
Cantech Controls Division  
Combustion Engineering  
Foxboro Canada Inc.  
Grodyne Controls Limited  
Industrial Projects Ltd.  
Leeds & Northrup, Canada  
Moore Instruments Ltd.  
Norspec Controls  
Provincial Controls  
R.A. Kirby Sales Inc.  
Romatec  
Rosemount Instruments Ltd.  
SRP control systems Ltd.  
Technel Engineering Ltd.  
ThermoElectric (Canada)  
Valley Process Spec.  
Willer Engineering Ltd.

## **DATA AQUISITION**

Alpha Controls & Inst.  
Brian Controls  
C.B. Engineering Ltd.  
CD Nova Tech Inc.  
Cambridge Control  
Combustion Engineering  
Grodyne Controls Limited  
Leeds & Northrup, Canada  
R.A. Kirby Sales Inc.  
Romatec  
Rosemount Instruments Ltd.  
SRP control systems ltd.  
Sharp Valve & Inst. Ltd.  
Simark Controls Limited  
Technel Engineering Ltd.  
Willer Engineering Ltd.

## **DIFFERENTIAL PRESSURE**

Alpha Controls & Inst.  
Baker Instruments Ltd.  
Brian Controls  
C.B. Engineering Ltd.  
Cancoppas Ltd.  
Cantech Controls Division  
Combustion Engineering  
Foxboro Canada Inc.  
Grodyne Controls Limited  
Leeds & Northrup, Canada  
Norspec Controls  
Provincial Controls  
Rosemount Instruments Ltd.  
SRP control systems ltd.  
Sarnia Piping Spec. Ltd.  
Simark Controls Limited  
Technel Engineering Ltd.  
United Electric Controls  
Willer Engineering Ltd.

## **DENSITY**

Alpha Controls & Inst.  
Bestobell Canada Limited  
Brian Controls  
Cancoppas Ltd.  
Cantrols Equipment Ltd.  
Foxboro Canada Inc.  
G.L. Stebbins Co. (1982) Ltd.  
Grodyne Controls Limited  
Industrial Projects Ltd.  
Leeds & Northrup, Canada  
R.A. Kirby Sales Inc.  
Romatec  
Ronan Engineering Ltd.  
Rosemount Instruments Ltd.  
Westech Instruments Ltd.

## **FITTINGS**

Provincial Controls  
Sarnia Piping Spec. Ltd.  
Tubetech Ltd.

## **FLOW SWITCHES**

Alpha Controls & Inst.  
Baker Instruments Ltd.  
Bestobell Canada Limited  
Brian Controls  
Cancoppas Ltd.  
Cantech Controls Division  
Grodyne Controls Limited  
Norspec Controls  
Provincial Controls  
R.A. Kirby Sales Inc.  
SRP control systems ltd.  
Sarnia Piping Spec. Ltd.  
Willer Engineering Ltd.

## **FLOW TOTALIZERS**

Alpha Controls & Inst.  
Baker Instruments Ltd.  
Bestobell Canada Limited  
Brian Controls  
Brooks  
Cambridge Control  
Cancoppas Ltd.  
Cantech Controls Division  
Cantrols Equipment Ltd.  
Combustion Engineering  
Foxboro Canada Inc.  
G.L. Stebbins Co. (1982) Ltd.  
Grodyne Controls Limited  
Industrial Projects Ltd.  
Moore Instruments Ltd.  
Norspec Controls  
R.A. Kirby Sales Inc.  
Romatec  
Ronan Engineering Ltd.  
Rosemount Instruments Ltd.  
SRP control systems ltd.  
Simark Controls Limited  
Valley Process Spec.  
Willer Engineering Ltd.

## **FLOW METERS**

Alpha Controls & Inst.  
Baker Instruments Ltd.  
Bestobell Canada Limited  
Brian Controls  
Brooks  
Cambridge Control  
Cancoppas Ltd.  
Cantech Controls Division  
Cantrols Equipment Ltd.  
Combustion Engineering  
Foxboro Canada Inc.  
G.L. Stebbins Co. (1982) Ltd.  
Grodyne Controls Limited  
Leeds & Northrup, Canada  
Moore Instruments Ltd.  
Norspec Controls  
R.A. Kirby Sales Inc.  
Romatec

Rosemount Instruments Ltd.  
SRP control systems ltd.  
SSCAN Instruments  
Sarnia Piping Spec. Ltd.  
Sharp Valve & Inst. Ltd.  
Simark Controls Limited  
Valley Process Spec.  
Willer Engineering Ltd.

#### **GAUGES**

Alpha Controls & Inst.  
Baker Instruments Ltd.  
Brian Controls  
Cantech Controls Division  
Foxboro Canada Inc.  
G.L. Stebbins Co. (1982) Ltd.  
Industrial Projects Ltd.  
Moore Instruments Ltd.  
Provincial Controls  
Romatec  
Ronan Engineering Ltd.  
SRP control systems ltd.  
Sarnia Piping Spec. Ltd.  
Tubetech Ltd.  
Westech Instruments Ltd.

#### **HOUSINGS**

Norspec Controls  
Provincial Controls  
Sarnia Piping Spec. Ltd.  
Sharp Valve & Inst. Ltd.  
Tubetech Ltd.

#### **HUMIDITY**

Alpha Controls & Inst.  
Baker Instruments Ltd.  
CD Nova Tech Inc.  
Cambridge Control  
Combustion Engineering  
Foxboro Canada Inc.  
G.L. Stebbins Co. (1982) Ltd.  
Grodyne Controls Limited  
Leeds & Northrup, Canada  
Norspec Controls  
R.A. Kirby Sales Inc.  
Romatec  
Rosemount Instruments Ltd.  
SRP control systems ltd.  
SSCAN Instruments  
Westech Instruments Ltd.  
Willer Engineering Ltd.

#### **LEVEL INDICATORS**

Alpha Controls & Inst.  
Baker Instruments Ltd.  
Bestobell Canada Limited  
Brian Controls  
CD Nova Tech Inc.  
Cambridge Control

Cancoppas Ltd.  
Cantrols Equipment Ltd.  
Combustion Engineering  
Foxboro Canada Inc.  
G.L. Stebbins Co. (1982) Ltd.  
Grodyne Controls Limited  
Industrial Projects Ltd.  
Leeds & Northrup, Canada  
Milton Roy Industries Ltd.  
Moore Instruments Ltd.  
Norspec Controls  
Provincial Controls  
R.A. Kirby Sales Inc.  
Romatec  
Ronan Engineering Ltd.  
Rosemount Instruments Ltd.  
SRP control systems ltd.  
Sarnia Piping Spec. Ltd.  
Sharp Valve & Inst. Ltd.  
Simark Controls Limited  
Tubetech Ltd.  
Westech Instruments Ltd.

#### **LEVEL INTERFACE**

Alpha Controls & Inst.  
Bestobell Canada Limited  
Brian Controls  
Brooks  
Cantrols Equipment Ltd.  
G.L. Stebbins Co. (1982) Ltd.  
Norspec Controls  
Provincial Controls  
R.A. Kirby Sales Inc.  
Ronan Engineering Ltd.  
SRP control systems ltd.  
Sharp Valve & Inst. Ltd.  
Simark Controls Limited  
Tubetech Ltd.  
Westech Instruments Ltd.  
Willer Engineering Ltd.

#### **LEVEL NON-CONTACT**

Alpha Controls & Inst.  
Baker Instruments Ltd.  
Bestobell Canada Limited  
Brian Controls  
Brooks  
Cantrols Equipment Ltd.  
G.L. Stebbins Co. (1982) Ltd.  
Industrial Projects Ltd.  
Norspec Controls  
Provincial Controls  
R.A. Kirby Sales Inc.  
Ronan Engineering Ltd.  
Rosemount Instruments Ltd.  
SRP control systems ltd.  
Simark Controls Limited  
Tubetech Ltd.  
Willer Engineering Ltd.

## **LEVEL SOLIDS**

Baker Instruments Ltd.  
Bestobell Canada Limited  
Brian Controls  
Brooks  
Controls Equipment Ltd.  
G.L. Stebbins Co. (1982) Ltd.  
Industrial Projects Ltd.  
Norspec Controls  
Provincial Controls  
R.A. Kirby Sales Inc.  
Romatec  
Ronan Engineering Ltd.  
Tubetech Ltd.  
Willer Engineering Ltd.

## **LEVEL SWITCHES**

Alpha Controls & Inst.  
Baker Instruments Ltd.  
Bestobell Canada Limited  
Brian Controls  
Brooks  
Cambridge Control  
Cancoppas Ltd.  
Cantech Controls Division  
Controls Equipment Ltd.  
Combustion Engineering  
G.L. Stebbins Co. (1982) Ltd.  
Industrial Projects Ltd.  
Moore Instruments Ltd.  
Norspec Controls  
Provincial Controls  
R.A. Kirby Sales Inc.  
Romatec  
Ronan Engineering Ltd.  
SRP control systems Ltd.  
Sarnia Piping Spec. Ltd.  
Sharp Valve & Inst. Ltd.  
Simark Controls Limited  
Tubetech Ltd.  
Valley Process Spec.  
Willer Engineering Ltd.

## **MULTIPLEXERS**

CD Nova Tech Inc.  
Cancoppas Ltd.  
Grodyne Controls Limited  
Industrial Projects Ltd.  
Provincial Controls  
SRP control systems Ltd.  
Willer Engineering Ltd.

## **pH INSTRUMENTS**

Alpha Controls & Inst.  
Brian Controls  
Cancoppas Ltd.  
Foxboro Canada Inc.  
Grodyne Controls Limited  
Leeds & Northrup, Canada  
Norspec Controls

R.A. Kirby Sales Inc.  
Romatec  
Rosemount Instruments Ltd.  
SRP control systems Ltd.  
SSCAN Instruments  
Tubetech Ltd.  
Willer Engineering Ltd.

## **PRESSURE INDICATORS**

Alpha Controls & Inst.  
Baker Instruments Ltd.  
Brian Controls  
Cambridge Control  
Combustion Engineering  
Foxboro Canada Inc.  
Moore Instruments Ltd.  
Norspec Controls  
Romatec  
Rosemount Instruments Ltd.  
SRP control systems Ltd.  
Simark Controls Limited  
Technel Engineering Ltd.  
Tubetech Ltd.  
Willer Engineering Ltd.

## **PRESSURE SWITCHES**

Alpha Controls & Inst.  
Baker Instruments Ltd.  
Brian Controls  
C.B. Engineering Ltd.  
Cambridge Control  
Foxboro Canada Inc.  
SRP control systems Ltd.  
Sharp Valve & Inst. Ltd.  
Simark Controls Limited  
Tubetech Ltd.  
United Electric Controls  
Willer Engineering Ltd.

## **PRESSURE TRANSMITTERS**

Alpha Controls & Inst.  
Baker Instruments Ltd.  
Brian Controls  
Cancoppas Ltd.  
Cantech Controls Division  
Combustion Engineering  
Foxboro Canada Inc.  
G.L. Stebbins Co. (1982) Ltd.  
Grodyne Controls Limited  
Industrial Projects Ltd.  
Leeds & Northrup, Canada  
Moore Instruments Ltd.  
Ronan Engineering Ltd.  
Rosemount Instruments Ltd.  
SRP control systems Ltd.  
Sarnia Piping Spec. Ltd.  
Sharp Valve & Inst. Ltd.  
Simark Controls Limited  
Technel Engineering Ltd.  
Willer Engineering Ltd.

**P.L.C.'s**

Baker Instruments Ltd.  
Brian Controls  
Cantech Controls Division  
Leeds & Northrup, Canada  
Romatec

**PNEUMATICS**

Alpha Controls & Inst.  
Baker Instruments Ltd.  
Brooks  
Cancoppas Ltd.  
Combustion Engineering  
Foxboro Canada Inc.  
Grodyne Controls Limited  
Moore Instruments Ltd.  
Norspec Controls  
Provincial Controls  
Romatec  
SRP control systems ltd.  
Tubetech Ltd.  
United Electric Controls  
Valley Process Spec.

**PUMPS**

Cancoppas Ltd.  
Milton Roy Industries Ltd.  
Norspec Controls  
Romatec  
Valley Process Spec.

**RECORDERS**

Alpha Controls & Inst.  
Baker Instruments Ltd.  
Brian Controls  
C.B. Engineering Ltd.  
CD Nova Tech Inc.  
Cantech Controls Division  
Combustion Engineering  
Foxboro Canada Inc.  
G.L. Stebbins Co. (1982) Ltd.  
Grodyne Controls Limited  
Leeds & Northrup, Canada  
Moore Instruments Ltd.  
Norspec Controls  
Provincial Controls  
Romatec  
Rosemount Instruments Ltd.  
SRP control systems ltd.  
SSCAN Instruments  
Sharp Valve & Inst. Ltd.  
Simark Controls Limited  
Technel Engineering Ltd.  
ThermoElectric (Canada)  
Tubetech Ltd.  
United Electric Controls  
Westech Instruments Ltd.  
Willer Engineering Ltd.

**SAFETY RELIEF VALVES**

Farris Industries  
Milton Roy Industries Ltd.  
Sharp Valve & Inst. Ltd.  
Valley Process Spec.  
Westech Instruments Ltd.

**SIGNAL CONDITIONING**

Alpha Controls & Inst.  
Brian Controls  
Brooks  
CD Nova Tech Inc.  
Cambridge Control  
Cantech Controls Division  
Cantrols Equipment Ltd.  
Grodyne Controls Limited  
Industrial Projects Ltd.  
Leeds & Northrup, Canada  
Moore Instruments Ltd.  
Norspec Controls  
Provincial Controls  
R.A. Kirby Sales Inc.  
Ronan Engineering Ltd.  
SRP control systems ltd.  
Simark Controls Limited  
Tubetech Ltd.  
Willer Engineering Ltd.

**TEMPERATURE INDICATORS**

Alpha Controls & Inst.  
Baker Instruments Ltd.  
Brian Controls  
Cambridge Control  
Cancoppas Ltd.  
Cantech Controls Division  
Combustion Engineering  
Foxboro Canada Inc.  
Grodyne Controls Limited  
Industrial Projects Ltd.  
Leeds & Northrup, Canada  
Moore Instruments Ltd.  
Norspec Controls  
Provincial Controls  
Ronan Engineering Ltd.  
SRP control systems ltd.  
Sarnia Piping Spec. Ltd.  
Sharp Valve & Inst. Ltd.  
Simark Controls Limited  
ThermoElectric (Canada)  
Tubetech Ltd.  
United Electric Controls  
Valley Process Spec.  
Willer Engineering Ltd.

## **TEMPERATURE SENSORS**

Alpha Controls & Inst.  
Baker Instruments Ltd.  
Bestobell Canada Limited  
Brian Controls  
C.B. Engineering Ltd.  
Cambridge Control  
Cancoppas Ltd.  
Cantech Controls Division  
Cantrols Equipment Ltd.  
Foxboro Canada Inc.  
Grodyne Controls Limited  
Industrial Projects Ltd.  
Leeds & Northrup, Canada  
Moore Instruments Ltd.  
Norspec Controls  
Provincial Controls  
Ronan Engineering Ltd.  
Rosemount Instruments Ltd.  
SRP control systems Ltd.  
Sarnia Piping Spec. Ltd.  
Sharp Valve & Inst. Ltd.  
ThermoElectric (Canada)  
Tubetech Ltd.  
United Electric Controls  
Willer Engineering Ltd.

## **TEMPERATURE TRANSMITTERS**

Alpha Controls & Inst.  
Baker Instruments Ltd.  
Brian Controls  
Cambridge Control  
Cancoppas Ltd.  
Cantech Controls Division  
Cantrols Equipment Ltd.  
Combustion Engineering  
Foxboro Canada Inc.  
Grodyne Controls Limited  
Industrial Projects Ltd.  
Leeds & Northrup, Canada  
Moore Instruments Ltd.  
Norspec Controls  
Provincial Controls  
Ronan Engineering Ltd.  
Rosemount Instruments Ltd.  
SRP control systems Ltd.  
Sarnia Piping Spec. Ltd.  
Sharp Valve & Inst. Ltd.  
ThermoElectric (Canada)  
Tubetech Ltd.  
Willer Engineering Ltd.

## **TRACING EQUIPMENT**

Bestobell Canada Limited  
Cantech Controls Division  
Norspec Controls  
Raychem Canada Limited

## **TRANSDUCERS**

Alpha Controls & Inst.

Baker Instruments Ltd.  
Brian Controls  
Brooks  
CD Nova Tech Inc.  
Cambridge Control  
Cancoppas Ltd.  
Cantrols Equipment Ltd.  
Combustion Engineering  
Foxboro Canada Inc.  
Lakeside Controls  
Leeds & Northrup, Canada  
Moore Instruments Ltd.  
Norspec Controls  
Romatec  
Rosemount Instruments Ltd.  
SRP control systems Ltd.  
Simark Controls Limited  
Technel Engineering Ltd.  
Tubetech Ltd.  
Willer Engineering Ltd.

## **TANK GAUGING**

Baker Instruments Ltd.  
Bestobell Canada Limited  
Brian Controls  
CD Nova Tech Inc.  
Cantrols Equipment Ltd.  
Foxboro Canada Inc.  
G.L. Stebbins Co. (1982) Ltd.  
Grodyne Controls Limited  
Industrial Projects Ltd.  
R.A. Kirby Sales Inc.  
Romatec  
Ronan Engineering Ltd.  
SRP control systems Ltd.  
Sarnia Piping Spec. Ltd.  
Sharp Valve & Inst. Ltd.  
Tubetech Ltd.  
Westech Instruments Ltd.

## **VALVE ACTUATORS**

Atlas Alloys  
Brian Controls  
Cambridge Control  
Cancoppas Ltd.  
Cantrols Equipment Ltd.  
Foxboro Canada Inc.  
Lakeside Controls  
Milton Roy Industries Ltd.  
Moore Instruments Ltd.  
Provincial Controls  
Romatec  
Sarnia Piping Spec. Ltd.  
Sharp Valve & Inst. Ltd.  
Tubetech Ltd.  
Valley Process Spec.

## VALVES

Alpha Controls & Inst.  
Atlas Alloys  
Bestobell Canada Limited  
Brian Controls  
Brooks  
Cambridge Control  
Cantrols Equipment Ltd.  
Foxboro Canada Inc.  
G.L. Stebbins Co. (1982) Ltd.  
Grodyne Controls Limited  
Hex Valve  
Industrial Projects Ltd.  
Jordan Valve  
Lakeside Controls  
R.A. Kirby Sales Inc.  
Romatec  
Sarnia Piping Spec. Ltd.  
Sharp Valve & Inst. Ltd.  
Tubetech Ltd.  
Valley Process Spec.

## VIBRATION

CD Nova Tech Inc.  
Cantrols Equipment Ltd.  
G.L. Stebbins Co. (1982) Ltd.  
Industrial Projects Ltd.  
Romatec  
Ronan Engineering Ltd.  
Rosemount Instruments Ltd.  
SRP control systems Ltd.  
SSCAN Instruments  
Tubetech Ltd.



Westech Industrial Ltd.  
Unit #7 - 7290 Torbram Road, Mississauga, Ontario L4T 3Y8  
Tel: (416) 676-1145, Telex: 03-822700 Fax: (416) 676-9361

### APPLIED AUTOMATION INC.

- Process Gas Chromatographs
- Process Liquid Chromatographs
- BTU Measurement
- Process Studies - Computers

### DUPONT PROCESS INSTRUMENTS

- Photometric Process Analyzers
- Moisture Analyzers
- Leak Detectors
- Thermal Analyzers
- Emission Monitors

### SERVOMEX LTD.

- Paramagnetic Oxygen Analyzers
- Zirconia Oxygen Analyzers
- Combustion Control Trim Systems
- Infra-Red Process Analyzers
- Portable Oxygen Analyzers

### SOLARTRON

- Gas Densitometers & Gravimeters
- Liquid Densitometers
- Flow Computers
- Hydrastep 7 Drum Water Level Gauge

### TOSHIBA INSTRUMENTATION DIVISION

- Distributed Control Systems
- Single Loop Controllers
- Recorders
- Magnetic Flow Meters

### VAREC

- Tank Breather Vents
- Flame Arresters
- Manhole Covers, Gauge Hatches
- Tank Level Gauges
- Tank Farm Inventory Management Systems
- Waste Gas Control Equipment
- Waste Gas Burners

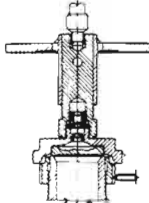
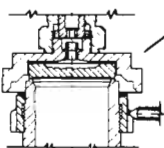
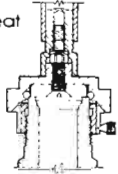
### WESTECH MANUFACTURING DIVISION

- Flare Ignition Systems
- Process Analyzer Shelters
- Custom Packaged Analysis and Control Systems
- Portable Boiler Igniters

### Y-Z INDUSTRIES

- Portable Sample Vessels
- Manual and Automated Sampling Systems

# 12 reasons why Farris is the first line of safety

- 
- 1 Unalterable high capacity regardless of blowdown ring position.
  - 2 Ease and economy in conversion to Bellows valve.
 
  - 3 2-1/2 to 1 ratio provides maximum resistance to galling and seizing.
  - 4 Hardened discs — only AR174PH steel used here for superlative hardness.
 
  - 5 Flat seats — no special tools required when maintaining.
  - 6 Only cap and lever assembly needed to convert top works.
  - 7 Designed to minimize strains caused by discharge piping.
  - 8 Optional o-ring seat seal for maximum tightness.
 
  - 9 Steam Jacket — perfect match to prevent fluid solidification and icing.
  - 10 Isolation of bonnet spring chamber protects against temperature, corrosion and foreign particles which may affect operation.
  - 11 Hexagonal socket on the top of the disc facilitates disassembly.
  - 12 Optional Farris Remotor rapidly depressurizes vessels in the event of an emergency.

## FARRIS INDUSTRIES CANADA

P.O. BOX 2776,

SARNIA, ONTARIO N7T 7W1

(519) 332-0141

- SAFETY RELIEF VALVES
- TANK VENTS & FLAME ARRESTERS
- CATALYTIC HEATERS
- VALVE REPAIR

Contact: MIKE WHITTON



**LEEDS & NORTHRUP**  
CANADA

**We put you in control.**

**LEEDS & NORTHRUP, CANADA**  
A Division of General Signal Limited

- Controllers and Control Devices
- Speedomax Recorders
- Liquid Analysis Instrumentation
- Gas Analysis Instrumentation
- Temperature Sensors
- Flow Measurement and Control
- Electronic Pressure Transmitters
- D.C.S. - Distributed Control Systems
- Data Acquisition & Management
- Distributed Control Systems
- Computer Interface Products

1344 FEWSTER DRIVE, MISSISSAUGA, ONTARIO, L4W 1A4  
Phone: (416) 238-6850 • Fax: (416) 238-6869 • Telex: 06-960326



**HEX VALVE**

Division of Richards Industries, Inc.

**3170 Wasson Road**

**Cincinnati, Ohio 45209-2381**

**MANIFOLD**

**INSTRUMENTATION - GAUGE VALVES**

*Call your Hex Valve Sales Representative:  
Sharp Valve & Instrumentation Inc. (519) 336-8484  
or call Hex Valve toll-free 800-354-0305*

**LTS SALES LTD.**

**1325 SHAWSON DR., MISSISSAUGA, ONT., L4W AC4**

**(416) 678-2131**

**Telex: 06968509**

**SMITH METERS INC. - MOORCO**

- METERING + CONTROL INSTRUMENTATION
- LOADING ARMS + SWING JOINTS

**AFL INDUSTRIES - OIL/WATER SEPARATORS**

- AUTOMATION/ELECTRONICS

**APPLICATION CONTROLS**

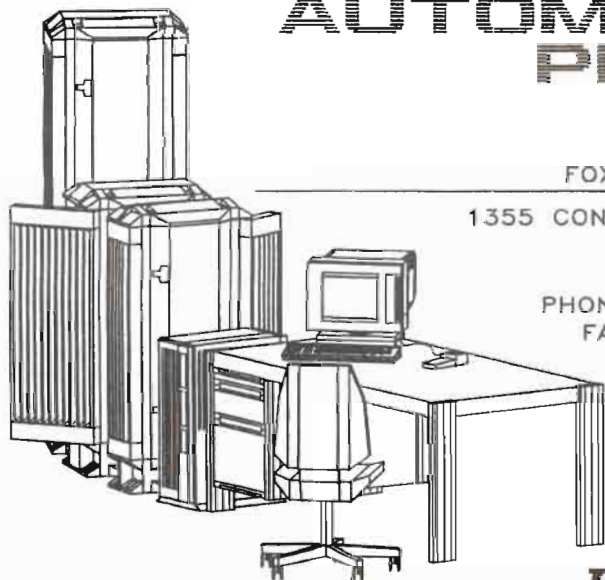
- TANK BLANKETING SYSTEMS

**PROTECTOSEAL**

- PRESSURE/ VACUUM VENTS
- FLAME ARRESTERS

**COMPLETE PACKAGED OR SYSTEMS RESPONSIBILITY**

# THE INTELLIGENT AUTOMATION PEOPLE



FOXBORO CANADA INC.

1355 CONFEDERATION STREET  
SARNIA, ONTARIO  
N7S 4T2

PHONE (519)339-9772

FAX (519)336-7533

FOXBORO CANADA INC.

**FOXBORO**

**PEACOCK**  
INC.

1158 Aerowood Drive, Mississauga, Ontario L4W 1Y5

Tel. (416) 625-7100 • Telex: 06-961291

Fax: (416) 625-7203

## MERIAM

- Manometers
- Orifice Plates
- Bellows D/P
- Accutubes
- Laminar Flow Elements
- Differential Pressure indicating Switches
- Merical - Portable Digital manometer/calibrator

## JERGUSON

- Flat Glass Gauge
- Tubular Glass Gauges
- Magnetic Liquid Level Gauges
- Valves
- Welding Pad Gauges
- Non-Frosting Gauges

## BUDENBERG

- Dead Weight Testers
- Test Gauges

## BINDICATOR

- RF 9000 Level Controls with Push Button Calibration
- Roto-Bin-Dicator Paddle Type Level Controls.
- Diaphragm Level Controls
- Liquid Level Controls
- Yo-Yo Provides Cable Measurement of Feet of Product/to Product
- Cap Level II continuous capacitance probe.

REGIONAL BRANCHES IN  
MONTREAL, TORONTO, CALGARY, EDMONTON and VANCOUVER  
SARNIA REP. - AL METCALFE

542-1973



**THERMO ELECTRIC**

**GET IT FAST ...**  
from our  
**Brampton  
Manufacturing Center**

CALL FOR **THERMO EXPRESS** SERVICE

- Thermocouples & RTD's
- T/C & Instrument Wire and Cable
- Controllers & Recorders
- Indicators & Transmitters
- CSA Explosion-Proof Sensors

12 Rutherford Road South, Brampton, Ont. L6W 3J2. (416) 451-0813  
Representatives: Tubetech Ltd., 829 Phillip St., Sarnia, (519) 344-5271  
Northern Abcor, 19 Gino St., Sudbury. (705) 625-2911

- TDC 3000 Distributed Control systems
- 'Smart' field transmitters
- Digitally Integrated Process Measurement
- Standalone controllers/recorders/small systems
- IPC620 programmable controllers
- Triple-redundancy critical process controllers

**PLUS**

On and off-site training programs customized to meet the customer's needs.

**PLUS**

Complete field service capabilities to support Honeywell and third-party products.

**Together, we can find the answers.**

# Honeywell

555 Consortium Court, London, Ontario N6E 2S8 (519) 685-2010

## BAKER INSTRUMENTS LIMITED

349 BOWES RD., UNIT ONE, CONCORD, ONTARIO L4K 1J3  
(416) 738-4780 Fax: (416) 738-4785

**ALNOR**



VELOMETERS - DEWPOINTERS - THERMOMETERS - PYROMETERS  
DEAD WEIGHT TESTERS - TEMPERATURE CONTROLS  
LOW PRESSURE DIFFERENTIAL PRESSURE SWITCHES, GAUGES, MANOMETERS  
DIFFERENTIAL PRESSURE TRANSDUCERS - MAGNEHELIC GAUGES - ANALOG & DIGITAL TACHOMETERS  
TEMPERATURE, PRESSURE & FLOW RECORDERS  
ROTOMETERS, ORIFICE PLATES & FLANGES, OPEN FLOW MEASUREMENT

**OVER FIFTY YEARS** serving industry in Canada

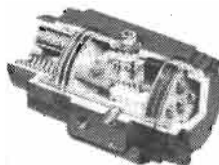
# WATTS BALL REGULATOR VALVES

SARNIA SALES & SERVICE

**T. J. McCARTHY LTD.**

519 - 336-2235

Bill Clarkson  
Tim McCarthy





**TEXAS  
INSTRUMENTS**

**Ontor Limited**

345 N. Christina St.  
Sarnia N7V 1Z3  
(519) 344-7444

**PROGRAMMABLE CONTROLLERS**

- 520C, 530C, 560, 565, 525
- Intelligent I/O
- TIWAY Networking

**COLOUR GRAPHICS**

- CVU5000 and TISTAR  
Operator Interface Systems  
for Plant Control

**PROCESS CONTROL AND PLANT MANAGEMENT**

**METRA**

- PLC Colour Graphic Interfaces

**VIDEK**

- Vision Systems

**DIGITRONICS**

- Computer I/O Systems

**CONTROL TECHNOLOGY**

- Displays

TORONTO • MONTREAL • SARNIA • CALGARY • EDMONTON • VANCOUVER

# At last, Instrumentation with brains, as well as brawn.

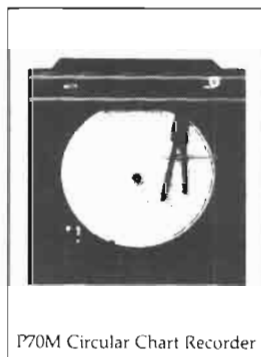
- Micro Processor Instruments
- Field Proved Worldwide
- Recorders • Flowmeters • Analyzers
- Intelligent Operation
- Intelligent Pricing



Flowmeters



P100M Strip Chart Recorder



P70M Circular Chart Recorder



ABB  
A B BROWN BROTHERS

**ABB Kent Inc. Industrial Measurements**

1825 Dundas St. East, Unit 7, Mississauga, Ontario L4X 1L6  
Tel: (416) 629-1428/FAX: (416) 629-3171

## **G. L. STEBBINS COMPANY (1982) LIMITED**

**P.O. BOX 6275, STATION D, LONDON, ONT. N5W 5S1 (519) 455-1350**

- MUESCO diaphragm control valves, temperature and pressure pilots, level controllers, drainers and airsets.
- MUESCO automatic valves for regulation and control of liquids.
- Butterfly valves, regulators, traps, strainers, pressure gauges.
- Ohmart density, level and moisture transmitters & belt scales.
- Flow meters and transmitters, gas meters & gas regulators.

GLENN FORSTER

GERRY STEBBINS



# HURON VALVE & FITTING LIMITED

JOE LAWLESS  
TONY OLSEN  
MIKE ROGERS  
MIKE REID

(519) 336-3453  
Telex 064-76120

P.O. Box 386  
Sarnia, Ontario N7T 7J2

## BRIAN CONTROLS

A DIVISION OF A. JOHNSON (CANADA) INC. 

### INSTRUMENTATION AND APPLICATION SPECIALISTS

#### PRESSURE

Gauges, Switches, Controllers, Transmitters, Seals and Protectors.

#### TEMPERATURE

Thermocouples, RTD's and Thermowells, Manufactured in Canada, Wire and Cable, Thermometers, Switches, Recorders, Controls and Transmitters.

#### FLOW

Vortex, Turbine, Magnetic, Paddlewheel, Variable Area, Positive Displacement, Sonic and Differential Pressure Flowmeters, Transmitters and Flow Computers.

#### LEVEL

Direct Reading Flat and Tubular Glass, Ultrasonic Point and Continuous Transmitters and Controls.

#### CALIBRATION & TEST

Primary Pressure, Force and Temperature Standards, Analytical Instruments and Industrial Shop Test Equipment.

#### SHOP & FIELD SERVICE

Repair, Calibration and Start-up Supervision.

#### APPLICATION ASSISTANCE

Configuration of Instrumentation Packages to specific customer needs.

294 Watline Ave.  
MISSISSAUGA, Ontario L4Z 1P4  
Telephone: (416) 890-5880  
Telex: 06-960180  
Fax: (416) 890-5510

880 Phillip Street  
SARNIA, Ontario N7T 1Z6  
Telephone: (519) 337-7591  
Telex: 06-960180  
Fax: (519) 336-0997



# PROVINCIAL CONTROLS

DIVISION OF 660567 ONTARIO LIMITED

P.O. BOX 2946 / 373 VIDAL ST. S. / SARNIA, ONT. N7T 7W2 / TELEPHONE: 519-336-7301  
FAX: (519) 336-8082

## — LOCAL DISTRIBUTORS OF —

- BILOK FITTINGS
- BIMBA AIR CYLINDERS
- ENERTROLS SHOCK ABSORBERS
- FIBERGLAS INSTRUMENT ENCLOSURES
- HANSEN QUIK CONNECT
- IMPERIAL EASTMAN HOSE & FITTINGS
- KINETROL VANE ACTUATORS
- MAGNETROL LEVEL CONTROLS
- MTL INTRINSIC SAFE BARRIERS
- NELES POSITIONERS
- NUMATICS SOLENOID VALVES
- PRIBUSIN SIGNAL CONDITIONERS & POWER SUPPLIES
- PROXIMITY LIMIT SWITCHES
- THERMO-KINETICS TEMPERATURE MEASUREMENT & CONTROL
- THERMOR BIMETAL & INDUSTRIAL THERMOMETERS
- PRESSURE & TEMPERATURE SWITCHES

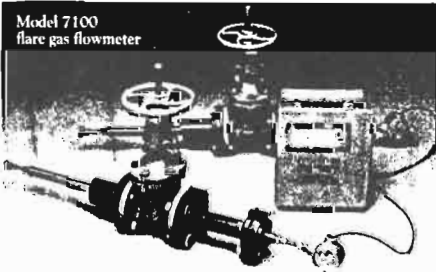
### INSTRUMENTS

## VERONICS INC.

250 WYECROFT RD., UNIT 15, OAKVILLE, ONTARIO L6K 3T7

TEL.  
(416) 842-5664  
TELEX  
06982203

Model 7100  
flare gas flowmeter



RANGES : 0.1 to 50 ft/s  
: 2 to 60 MOLECULAR WGT.  
: TO 20,000 lb/hr.

RELIABLE FOR STEAM CONTROL  
MICROPROCESSOR BASED  
LOW MAINTENANCE TRANSDUCERS  
LINEAR 4 to 20 mA OUTPUTS

DEW/FROST POINT METERS  
MOISTURE TRANSMITTERS/ALARMS  
RH METERS AND TRANSMITTERS  
portable/continuous  
OXYGEN ANALYSERS (PPM & %)  
FLUE GAS ANALYSERS  
GAS ANALYSERS FOR CO, CO<sub>2</sub>, H<sub>2</sub>S  
H<sub>2</sub> and others.  
TC/TOC/TOD ANALYSERS  
LAB & PROCESS TITRATORS  
AIR VELOCITY METERS/SYSTEMS  
ULTRASONIC FLOWMETERS



**ENTERPRISES**  
(SARNIA) LTD.  
177 Samuel St.  
SARNIA, ONT., N7T 7L3

FOR FAST, RELIABLE  
ELECTRIC APPARATUS SERVICE

**PHONE**  
**Anytime - 24 hr. SERVICE**  
**332-8800**



C.S.A. QUALIFIED TO REPAIR EXPLOSION  
PROOF MOTORS



## INDUSTRIAL PROJECTS LTD.

REPRESENTING

- CONANT PRECISION SELECTOR VALVES
- ELECTRON MACHINE CORP. INLINE REFRACTOMETERS AND WIRE GAUGES
- RONAN NUCLEAR DENSITY & LEVEL GAUGES AND BELT SCALES
- RONAN MONITORS AND ANNUNCIATORS
- INTERNATIONAL SENSOR TECHNOLOGY GAS MONITORING INSTRUMENTS

100 — 14 THE EAST MALL  
TORONTO, ONTARIO M8Z 5X2

TEL. (416) 252-7368

FAX: (416) 252-7360

TELEX 06-986766

## **C**ontrols EQUIPMENT (LONDON) LTD.

317 ADELAIDE STREET S.  
LONDON, ONTARIO N5Z 3L3

PHONE: (519) 681-9390  
TELEX: 064-7217 - FAX: (519) 681-2905

*Exclusive Ontario Representatives with Stock in London for:*

ANNIN AND MASONIELAN — Control Valves, Regulators & Level Controllers  
ATWOOD & MORRIL CO. INC. — Specialty Valves  
B/W CONTROLS INC. — Relays and Level Controls  
DANIEL INDUSTRIES INC. — Flow Measurement Equipment  
ROCHESTER INSTRUMENT SYSTEMS INC. — Annunciators, Alarms & Transmitters  
TEXAS NUCLEAR — Gamma Based Instruments  
RAMSEY ENGINEERING — Scales, Feeders & Batch Weighers  
SKOTCH — Burner Valve Systems

# New, low-cost temperature and pressure switches for hazardous environments.

- Designed specifically for Class I, Division II locations
- One piece, die cast aluminum body with epoxy coating
- Hermetically sealed switch and terminal block wiring
- Adjustable ranges from 30" HgVac to 2500 psi and -120° to +1000°F
- CSA certified
- More than 30 models



**117 Series**

**MOST MODELS IN STOCK**

**UE** United Electric Controls (Canada) Ltd.

5320 Bradco Blvd.  
Mississauga, Ontario L4W 1G7  
Telephone: 416/625-5082  
Fax: 416/625-5709



## LAKESIDE CONTROLS LTD.

R.R # 1, Hyde Park  
Ontario, Canada N0M 1Z0  
(519) 472-6771  
Telex: 064-7172

### FISHER CONTROLS

- Control Valves and Regulators
- Noise & Cavitation Trim
- Vortex Flowmeters
- Plant Studies & Software Services
- Provox Distributed Control
- Available London Stock of Regulators and Instruments

### POSI-SEAL

- High performance Butterfly Valves
- Fire-safe and Cryogenic Valves

### CROSBY VALVE

- Safety Relief Valves

### BADGER METER

- Research Control Valves

### GO-SYSTEMS

- Valve Position indication all types

### TK BALL VALVES

- Emergency Shut Down
- Fire Safe Double Block & Bleed

### AUTOMAX CONTROLS

- Pneumatic Actuators

U&I SUPPLY

U&I SUPPLY

U&I SUPPLY

# U&I SUPPLY

FOR  
INSTRUMENTATION NEEDS  
WE OFFER:

**ANDERSON GREENWOOD**

Hand Valves, Needle Valves, Gauge Valves, Instrument  
Manifolds, Instrument Enclosures and Accessories

**ARJAY**

Capacitance Level Probes and Controls

**BESTOBELL MOBREY**

Level, Pressure, Temperature and Flow Control

**HAENNI**

High Quality Pressure and Vacuum Gauges

**IMPERIAL EASTMAN**

Tube Fittings, including Hi-Seal, Braze-Seal, Hi-Duty  
and Poli-Flo Tubing and Hose, Couplings, Valves and  
and Tubing Tools

**KEDDCO MANUFACTURING**

Orifice Plates, Spectacle Blinds, and Strainers

**WORCESTER**

Ball, Butterfly, and Control Valves, Complete with  
Pneumatic and Electric Actuators and Positioners

---

**UTILITY AND INDUSTRIAL SUPPLY LTD.**

645 Keddco Street,  
SARNIA, ONTARIO

Telephone: 519-344-3614

Fax: 519-344-3181

Telex: 064-76171

U&I SUPPLY

U&I SUPPLY

U&I SUPPLY

U  
&  
I

S  
U  
P  
P  
L  
Y

U  
&  
I

S  
U  
P  
P  
L  
Y

U  
&  
I

S  
U  
P  
P  
L  
Y

U  
&  
I

S  
U  
P  
P  
L  
Y

U  
&  
I

S  
U  
P  
P  
L  
Y

U  
&  
I

S  
U  
P  
P  
L  
Y

# **Combustion Engineering**

## **A single source for your process needs**

### **Taylor Instrumentation Products**

- Controlling and Recording Instruments
- Transmitters
- Flow Measurements
- Instrumentation Systems

### **Taylor Control Room Systems**

- Regulatory Controls
- Supervisory Controls
- Optimizing Strategies
- Plantwide Control and Information Management

### **AccuRay Measurement & Actuators**

- Analytical Measurement Systems
- Actuators
- MD and CD Controls
- Production Reporting

### **Afora Products**

- Pulp Mill Optimization Packages
- Paper Mill Optimization Packages
- Automation Systems
- Energy Automation

**For more information contact:**

**Combustion Engineering Canada, Inc.**  
**Process Automation Business**  
75 Tycos Drive  
Toronto, Ontario, Canada M6B 1W4  
416-787-1651

**COMBUSTION**  **ENGINEERING**

# ARMATEK CONTROLS LIMITED

Process Instruments & Controls – Sales & Service



- ITT Barton Instruments
- Beta Products
- Burns Engineering
- G.W. Dahl
- Fluid Data
- Fluke Electronics
- Moore Industries
- Nusonics
- O'Brien
- Ohio Semitronics
- Rohrback Cosasco
- Sor

TEL.: (519) 332-0100

FAX: (519) 332-8821



## PMP INSTRUMENTATION LTD.

230 Shamrock Street  
Sarnia, Ontario N7T 7J4

(519) 336-2405  
Fax (519) 332-4811

Stocking Distributor For:



**THERMON CANADA LIMITED**

**CTC** COMPUTER  
TECHNOLOGY  
CORPORATION

**Davis Controls**  
LIMITED



**MAGNETROL**  
INTERNATIONAL, LTD.

**50**  
YEARS OF  
RELIABILITY

- Ultrasonic Controls
- Capacitance Controls
- Pneumatic Controllers

6291 - 18 DORMAN RD.  
MISSISSAUGA, ONT. L4V 1H2  
(416) 678-2720



- External Cage Controls
- Float Controls
- Displacer Controls

REPRESENTED BY  
**PROVINCIAL CONTROLS**  
336-7301

## JORDAN VALVE

3170 Wasson Rd.

Cincinnati, Ohio 45209

Phone Toll-Free 800-354-0305

**JORDAN VALVE**

SLIDING GATE REGULATORS AND CONTROL VALVES  
*36 hour shipment usually available*



Call your Jordan Valve sales representative:

**JENKINSON & COMPANY LTD.**  
TORONTO (416) 233-6245

## NOTICE

Our third dinner meeting of the year was held on January 23, at the Sarnia Golf and Curling Club.

President Irwin Hawkes presented an award to Ken Blair of C.I.L. our Education Chairman for his outstanding work in putting together last years Instrumentation Short Course at Lambton College. Without Ken's hard work and extra effort this would not have been a success. Thankyou Ken.

Doug Carter our membership chairman also handed out member certificates to several new I.S.A. inductees. Congratulations to all new members.

Our guest speaker was Mr. Rogers Hall from Schlumberger Industries. His topic covered Densitometers, their applications either gas or liquid. There are two basic types vibration sensing and nuclear with various considerations to be considered in sizing and installing densitometers. Temperature, pressure and compressibility being key factors in both liquid and gas applications.



# Instrument Society of America

*SARNIA SECTION*

P.O. BOX 206 / SARNIA, ONT. N7T 7H9

## MEETING NOTICE

THE MARCH MEETING WILL FEATURE

Mr. Jim Millen Administrator for Lambton C.A.E.R. program.  
Jim also happens to be an Engineer with Esso Petroleum.

Topic: What is C.A.E.R. and what it does.

Date: March 20, 1989. Sarnia Golf and Curling Club.

Coctails 6:00 pm

Dinner 7:00 pm

Members \$7.00

Non-members \$12.00

For reservations call:

Provincial Controls - Gail

336-7301

Willer Engineering - Maureen

336-3006

*INTERNATIONAL HEADQUARTERS*

67 ALEXANDER DRIVE, P.O. BOX 12277, RESEARCH TRIANGLE PARK, NC 27709  
TELEPHONE (919) 549-8411 • TELEX 802-540

Instrumentation • Systems • Automation — for the benefit of mankind

**Representing Quality:**

- **Coreci**  
PID controllers
- **Exac Corporation**  
Mass Flowmeters
- **General Monitors**  
Gas & Flame Detection
- **Hartmann & Braun**  
Transmitters
- **Seiscor/Vericom**  
Remote Monitoring
- **Wika Tronics**  
Transducers
- **Halliburton Services**  
Turbine Meters



**SIMARK CONTROLS LTD.**

#19, 12 Bram Court  
Brampton, Ont. L6W 3R6  
(416) 454-0675



**QUALITY INSTRUMENTATION  
& CONTROLS  
AT COMPETITIVE PRICES!**

- **LEVEL CONTROL AND INDICATION •**
- **SLUDGE DENSITY MEASUREMENT •**
  - **OPTICAL FIRE DETECTION •**
- **TEMPERATURE CONTROL AND MEASUREMENT •**
  - **STEAM TRAPS AND CONTROLS •**

**IN CANADA SINCE 1953**

**TORONTO:**  
245 Norseman Street  
Toronto, Ontario M8Z 2R5  
Phone: (416) 231-9216  
Fax: (416) 231-9121

**EDMONTON:**  
10235 - 101 Street  
Edmonton, Alberta T5J 3G1  
Phone: (403) 426-2104  
Fax: (403) 426-0005

**MONTREAL:**  
P.O. Box 10  
Roxboro, Quebec H8Y 3E8  
Phone: (514) 684-8053  
Fax: (514) 681-4395



145 The West Mall, Suite 211  
 Etobicoke, Ontario M9C 1C2  
 Phone: (416) 622-9894 Fax: (416) 622-1847

Action Instruments  
 Cashco Canada, Inc.  
 Data Industrial  
 Multilin Ltd.  
 Ametek - Panalarm Div.  
 United Electric

Signal Conditioners - Digital Indicators - Transmitters  
 Control Valves - TFE Lined Valves - Self Contained & Backpressure Regulator Valves  
 Flow Sensors & Digital Flow Monitors  
 Motor Protection Relays - Temp. Monitors & Controls for Motor Windings, Bearings & Power Transformers  
 Annunciators - Graphics Display - Analog Monitoring - Lamp Cabinets  
 Electromechanical Products - Pressure & Temperature Switches



• INSTRUMENTATION  
 ANALOG/DIGITAL  
 FIBRE OPTICS  
 TELEMETRY



**CD Nova-Tech Inc.**

SERVING HIGH TECHNOLOGY

**INSTRUMENTS AND CONTROLS FOR INDUSTRY**

• SALES

• SERVICE

• CALIBRATION



• ENVIRONMENTAL



• VIBRATION/BALANCING



• ENERGY/POWER  
 RELATED

• VANCOUVER

• OTTAWA

• CALGARY

• MONTREAL

• TORONTO

**CD NOVA-TECH INC.**

95 Glen Cameron Road, Thornhill, Ont. • L3T 1N8  
 Telephone (416) 731-6043 Telex 06-964507

# CONVAL EQUIPMENT

FEATURING:

**NELES INC.**

**ASCO**



**H.D. BAUMANN  
 CONTROL VALVES**



**CANADIAN WORCESTER**

**MCC POWERS  
 PROCESS CONTROL**



Sarnia (519) 344-3646  
 Toll Free 1-800-265-1422  
 1173 Michener Rd., No. 5  
 Sarnia, Ontario N7S 4W3

# ADVANCED SENSOR TECHNOLOGY FOR TODAY'S NEEDS!

PRESSURE  
VACUUM  
DISPLACEMENT  
LOAD  
FORCE  
SLOPE/TILT  
ACCELERATION  
TORQUE  
VELOCITY  
VIBRATION



GAUGING  
JOYSTICKS  
TRACKER BALLS  
ENCODERS  
MOUSE  
RECORDERS  
INDICATORS  
SIGNAL CONDITIONING  
DATA ACQUISITION  
CUSTOM ELECTRONICS

For further information and applications assistance contact



**DURHAM  
INSTRUMENTS**

division of BUCHAN INSTRUMENTS INC.

P.O. Box 426, Pickering, Ontario L1V 2R7

**416-839-9960**

**SPS**

# Sarnia Piping Specialties Ltd.



**GYROLOK**

**Garlock**



**Bourdon**



INC. A VEMCO CO



**COMOFLOW**

**Statham**



SPS SARNIA  
P.O. BOX 2018  
510 WILLIAMS DR.  
SARNIA, ONT.  
N7T 7L1  
(519) 336-8820  
FAX: (519) 336-2033



PLASTIC-LINED PIPING PRODUCTS



THE FLOWMETER SPECIALISTS

## BROOKS INSTRUMENT DIVISION EMERSON ELECTRIC CANADA LIMITED

P.O. BOX 150,  
MARKHAM, ONTARIO  
L3P 3J6  
(416) 475-4650 TELEX: 06-986120  
FAX: (416) 475-4626

P.O. BOX 787  
CORUNNA, ONTARIO  
N0N 1G0  
(519) 344-8700  
FAX: (519) 862-2443

### SPECIALISTS IN FLOW MEASUREMENT

ROTAMETERS AND FLOW CONTROLLERS • MAGNETIC FLOWMETERS  
TURBINE FLOWMETERS • POSITIVE DISPLACEMENT FLOWMETERS  
(Oval Gear, Bi-Rotor, Oscillating Piston and Nutating Disc)  
Mass Flow Measurement

PROPELLER TYPE WATER METERS • STRAINERS & AIR ELIMATORS  
VALVES, FLOW AND PRESSURE CONTROL

Also Representing: — FAIRCHILD INTERNATIONAL  
(Pneumatic Regulators and Relays)

YVES ROUTHIER — Corunna

ROGER VACHON  
BARRY EMMERSON — Markham



## Drexelbrook Level Controls

Leader in level and open channel flow controls —

LIQUIDS GRANULARS INTERFACES CORROSIVES

- All electronic
- Ignores coatings
- No moving parts
- Maintenance free

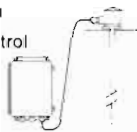
### Z-tron™ Level Switch

The level switch that always works



### True Level™

Accurate control regardless of changes in material, density, temp, etc.



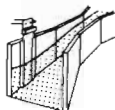
### UniversaLevel™ Transmitter

2-wire continuous level system



### Open Channel Flowmeter

Accurate; ignores coatings; doesn't interfere with flow stream



### Tru-View™

Color graphics micro-computer system for multi-channel control



### Universal On/Off Transmitter

2-wire design, fault monitoring, multi-channel control.



All available through



**BROOKS**  
THE MEASURE OF EXCELLENCE

BROOKS INSTRUMENT DIVISION  
EMERSON ELECTRIC CANADA LTD.  
P.O. BOX 787  
CORUNNA, ONTARIO N0N 1G0  
(519) 344-8700 / Fax: (519) 862-2443

## P. F. VERMEER LTD.

100 WEST BEAVER CREEK RD., UNIT 16, RICHMOND HILL, ONTARIO, L4B 1H4

PHONE: (416) 889-7502 TELEEX: 06-964589 FAX: (416) 889-7739

- Signal conditioners, 7 year warranty
- O<sub>2</sub> analyzers, process and combustion
- Combustion efficiency analyzers, O<sub>2</sub>-CO portable and in-situ.
- Analyzers for Petro-Chem applications
- CO, CO<sub>2</sub>, H<sub>2</sub>, N<sub>2</sub>, SO<sub>2</sub>, HCl, NO, NO<sub>x</sub>, H<sub>2</sub>O, HF
- Emissions monitoring analyzers
- Moisture in solids, moisture in food products
- I-P and P-I converters, digital pressure meters
- Non contact level and interface measurement
- Tank level measurement from outside of tank
- Ultrasonic level switches
- pH and conductivity measurement and control

## VERMEER



### WESTINGHOUSE CANADA INC. AUTOMATION TECHNOLOGY

65 WEST BEAVER CREEK RD. RICHMOND HILL ONT. L4B 1K4 (416) 731-1414 FAX: (416) 731-2372

#### COMBUSTION CONTROL PRODUCTS

FULL RANGE OF COMBUSTION CONTROL PRODUCTS INCLUDING:

IN-SITU OXYGEN AND O<sub>2</sub>/COMBUSTIBLES ANALYZERS FOR  
PROCESS TEMPERATURES UP TO 2600 DEG. F.

NDIR CARBON MONOXIDE ANALYZER.

IN-SITU SO<sub>x</sub> ANALYZER. PORTABLE ANALYZERS.

POWER POSITIONERS.

COMBUSTION CONTROL SYSTEMS. CUSTOM-ENGINEERED TO SUIT  
YOUR APPLICATION.

MANAGEMENT INFORMATION SYSTEMS



----- WE'RE MAKING SURE

FOR INFORMATION, CONTACT YOUR LOCAL AREA DISTRIBUTOR:  
ROMATEC LTD.

## MYCRO Moore Process Control Systems

# MYCRO

Distributed Systems  
Instruments

Service  
Training

# MYCRO

Computer Products  
Software  
Applications Engineering

Educational Equipment

Moore Instruments Ltd./Ltée., P.O. Box 370, Brampton,  
Ontario L6V 2L3 (416) 457-9638 Toll Free: 1-800-387-2547 Fax: (416) 457-4182



# R.A. KIRBY SALES INC.

P.O. BOX 177, STATION "S"  
TORONTO, ONTARIO M5M 4L7

TEL. (416) 638-1080  
FAX (416) 638-9389

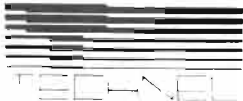
- ANALYZERS FOR LAB. OR PROCESS
  - I.R. HIGH LEVEL SULFUR TRACE H<sub>2</sub>S, TOTAL SULFUR
  - SULFUR SPECIFIC CHROMATOGRAPHS
  - TOTAL ORGANIC NITROGEN
  - MOISTURE - IN GAS OR LIQUIDS
  - GAS BTU CHROMATOGRAPHS
  - DENSITOMETERS FOR GAS, LIQUIDS OR SLURRIES
  - GRAVITOMETERS - PORTABLE OR STATIONARY
- DATA ACQUISITION UNITS - PORTABLE AND STATIONARY
- T. F. M. METERS & CONTROLS
- THERMAL FLOW METERS
- AUTO. FLOW RATE CONTROLLERS
- HEDLAND FLOW METERS
- MASS FLOW COMPUTERS
- DEAD WEIGHT TESTERS & GAUGES
- TANK GAUGING SYSTEMS MANUAL & AUTOMATIC
- MIXERS-HIGH SHEAR, HIGH SPEED
- CONTROL VALVES-BALL VENTURI
- BATCHING & WEIGHING SYSTEMS
- H<sub>2</sub>S, O<sub>2</sub> & GAS DETECTORS

## ALPHA

CONTROLS AND INSTRUMENTATION

361 Steelcase Rd. West, Unit 3  
Markham, Ontario, Canada L3R 3V8  
Tel: (416) 477-2133 Telex: 06-986761

- Intrinsic Safety
- Analytical Instruments
- Temperature Controls & Sensors
- Level Controls
- Calibrators
- Pressure Controls
- Control Valves
- Flow Meters
- Data Acquisition Systems
- Signal Conditioning
- Indicators & Recorders
- Energy Monitoring



### TECHNEL ENGINEERING INC.

120 Whitmore Road, N° 8  
P.O. BOX 15, Woodbridge  
Ontario Canada, L4L 1A9  
Tel. (416) 851-4244 Fax: (416) 851-5743

#### DATA ACQUISITION & CONTROL

- Real time process Automation Systems
- MICROVAX II and IBM PC based systems
- Field proven I/O Modules
- Powerful distributed systems

#### CHART RECORDERS

- 32 channels of Analog and digital Recording
- Reliable high resolution, Thermal Printing
- 512 kbyte memory for transient recording
- Designed & manufactured in Canada

#### PRESSURE

- Ranges 0-0.27" H<sub>2</sub>O through 15,000 PSI
- S/S diaphragm
- Digital Manometers
- Portable Pressure Calibrators
- Automatic Pressure Controllers

#### PRESSURE STDs

- Manual/Computer controllable Dead Weigh Gages
- Accuracy  $\pm 0.01\%$  of reading
- portable xter std

# Production Control Equipment

## Presco Dyne

A compact self-contained system that provides positive actuation of emergency shut-down of surface safety valves under all climatic conditions.



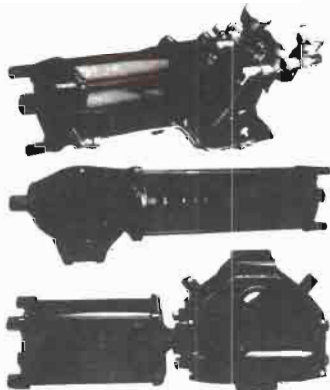
## Presco Switch

A pressure-responsive device that opens or closes one or more integral electrical switches at predetermined set points in order to start or stop pump motors.



## Barber Lodeen Valve Actuators

High performance piston-operated hydraulic and pneumatic valve actuators for quarter-turn valves. These Q-turn<sup>®</sup> actuators are available in double-acting and spring-return configuration for valves ranging from 1 inch to 56 inches.



## Pigging Valves

A safe means of inserting pig balls is combined with a reliable flow-line valve. The valve is available in 2", 3" and 4" sizes with line pipe threads or flanges to 900 ansi.



## Actuated E.S.D. Pigging Valves

A hydraulic self-contained E.S.D. system that combines flowline protection and pigging operations into one efficient and economical package.



## Presco Pilot

A pressure-responsive 3-way poppet valve, typically used to control the actuator on wellhead surface safety valves or pipeline emergency shut-down valves, either hydraulic or pneumatic.



## Lev-O-Matic

Opens or closes electrical switches in response to variations in low-pressure fluid heads corresponding to fluid levels in storage tanks in order to start or stop pump motors.



P.O. Box 26  
Sarnia, Ontario  
N7T 7H8



B.M.H. INDUSTRIES INC.

Tel: (519) 332-8088  
Fax: (519) 332-8042

## INSTRUMENTATION SERVICES

**FLOW** Magnetic Flowmeters  
Strain Gauge Flowmeters  
Open Channel Ultrasonic Flowmeters  
Viscosity Monitoring  
Intrinsic Safety Barriers  
& Accessories  
Intrinsically Safe Multiplexers  
Absolute Gauge & Differential  
Pressure Transmitters  
Signal Conditioning Modules

**CHLORINATORS** Cylinder Mounted Feed Type

**VALVE POSITIONERS** Pneumatic: Single & Double Acting  
Electric/Pneumatic

**ACTUATORS** Pneumatic

**PUMPS** Vacuum (Stainless Steel Bellows)  
Chemical Feed  
Self Priming  
Centrifugal

**WASTE TREATMENT SYSTEMS** "Automatic" Gravity  
Pressure & Vacuum  
Filtration Systems  
Waste Water Portable Samplers  
Sludge Samplers  
Effluent Samplers

**FILTRATION SYSTEMS** Chemical  
Oil  
Reconditioning Station

**ANALYTICAL** Dissolved Oxygen Systems —  
PPM, PPB  
Suspended Solids Monitors  
Sludge Level Detectors — Optical  
& Ultrasonic  
Sludge Interface Detection,  
Ultrasonic  
Laboratory Instruments  
pH 0-14 or 2-12 pH  
ORP & Specific ION Measurement  
Sludge Samplers  
Effluent Samplers

**ELECTRONIC MFG. INDUSTRY** Environmental Test Chambers  
Semiconduction Handlers  
Programmers  
Semi Automatic/Manual  
Wafer Probing Station & Accessories

**TEST & CALIBRATION** Complete Range of Testing  
& Calibration  
Monitors for Process Industries

**TEMPERATURE CONTROL** Mobile, Temperature Computer  
Control Probe

## CANOPPAS LIMITED

1047 North Service Rd. E., Oakville, Ont. L6H 1A6  
Phone (416) 845-4841 Telex 06-982363

# NORSPEC CONTROLS LTD.

263 St. Andrew St. (519) 332-2433  
Sarnia, Ont. N7T 2L3 Fax: (519) 332-4707

**ANALYZERS** Gas Analyzers,  
Combustible, O<sub>2</sub>,  
H<sub>2</sub>S, SO<sub>2</sub>  
Gas Analyzers, IR, C<sub>12</sub>,  
NH<sub>3</sub>, CO, CO<sub>2</sub>, NO<sub>2</sub>  
Gas Analyzers, Flame  
Ionization

**TEMPERATURE** Temperature Sensors  
Temperature  
Transmitters  
Temperature  
Controllers  
Non-Contact Temp.  
systems

**PRESSURE** Pressure Transducers  
Pressure Indicators  
Pressure Transmitters

**FLOW** Flow Sensors,  
Anemometers  
Turbine Meters  
PD Meters  
Indicators/Totalizers  
Liquid & Gas Flow  
computers

**LEVEL** Level Indicators  
Level Switches  
Level Monitors

**WATER QUALITY** pH/ORP, Turbidity  
Conductivity,  
Resistivity  
Dissolved Oxygen  
Process Photometers  
Metering Pumps

**HUMIDITY** Humidity Sensors  
Relative Humidity  
Controllers  
Moisture in Solids

**SIGNAL CONDITIONING** Amplifiers, Alarm  
Relays  
Loop Isolators  
Signal Converters  
Intrinsic Safety Barriers

**DIGITAL INDICATORS** AC & DC Voltage,  
Current, T/C, RTD  
Frequency, Tachometer,  
Pressure

**FILTERS** Sample Filters for  
Instruments and  
Analyzers  
Instrument Air Filters  
High Pressure Gas  
Filters  
Replacement Elements  
for Balston, Pall,  
Ultrafilter, and others.

# NELES - JAMESBURY

Box 352 Sarnia, Ont. N7T 7J2

METAL & RESILIENT SEATS	CRYO TO 1200° f
BALL VALVES 1/4" - 3"	screwed, socket weld butt "
BALL VALVES flanged	150-300-600-900-1500lb.
BUTTERFLY VALVES lug, flg., butt end, wafer,	" " " " " "
ACTUATORS piston - double acting, spring return vane	" "
	spring-diaphragm
	electric
POSITIONERS pneumatic, electric	
CONTROL VALVES globe, ball, butterfly, sector ball Q ball & noise trims	
FIRE TESTS api 607, bs 5146, exxon 3-14-1-2a	

REP: IAN SHOULDICE 336-3025 fax 336-0763

STOCKING DISTRIBUTOR:

**ATLAS ALLOYS** fax 336-0797

128 Kendall St, Point Edward, Ont., N7V 3H8  
336-0530

# MADE TO MEASURE



**W**e provide custom-tailored answers to your process instrumentation and analysis needs. First of all, we offer the most comprehensive choice of measurement equipment available. Just as important is our expertise. Willer engineers and technicians are always available to give you detailed information on what you should be looking for in instrumentation. We regularly issue technical bulletins and product information of all kinds. **Send for a copy of our product newsletter.**



Answers made to measure: Temperature Pressure Flow Analyzers

**TORONTO**  
422 CONSUMERS ROAD  
WILLOWDALE, ONT.  
M2J 1P8  
(416) 499-4421  
TELEX: 06-986816  
FAX: (416) 499-0816

**MARITIMES**  
1585 BARRINGTON ST.  
SUITE 303  
HALIFAX, N.S.  
B3J 1Z8  
(902) 420-1117  
FAX: (902) 429-6464

**MONTREAL**  
6333 CHEMIN ST-FRANÇOIS  
ST-LAURENT, QUÉBEC  
H4S 1B6  
(514) 333-8555  
TELEX: 05-824266  
FAX: (514) 333-4662

**SARNIA**  
P.O. BOX 2866  
SARNIA, ONTARIO  
N7T 7W1  
(519) 336-3006  
FAX: (519) 344-0607



**Davis Controls**

Toronto

(416) 233-3211

## Level Controls

Endress + Hauser  
Warrick  
Mercoid  
Klinger  
Rochester Gauge

## Timers, Counters, PLC's, PLS, Encoders, Temp. Control

Eagle Signal  
Redington  
Autotech  
Hy-Cal  
Dynapar

Sandtron  
Syracuse  
Comark

## Pneumatics

Legris  
Quiet  
Barrington  
Colder  
Fastest  
Whitman Controls

Allenair  
Fabco-Air  
Schradar  
Bellows

## Flow Controls

Polysonics  
Flow Research  
Intek  
Nissin  
Oval  
Hedland  
Endress + Hauser  
W.E. Anderson

## Switches, Relays

Mercoid  
Durakool  
Rex  
Eagle Signal  
Balluf  
Furnas  
SIOC

## Valves & Gauges

Honeywell Skinner  
Klinger  
+ GF +  
Tomoe  
Inbal  
McDaniel  
Vraco

Distributed by:

PMP Instrumentation  
230 Shamrock St.  
Sarnia, Ont.  
N7T 7J4  
519-336-2405

Endress + Hauser,  
Polysonics, Klinger

# TROY

CONTROL SYSTEMS INC.

1200 MICHENER RD., SARNIA, ONTARIO N7S 4B1

ROTORK ELECTRIC ACTUATORS

ROTORK PNEUMATIC ACTUATORS

PROMAC SIGNAL CONDITIONERS

TROY CONTROL SYSTEMS INC

TROY CONTROL SYSTEMS INC

TROY CONTROL SYSTEMS INC

WESTLOCK

LINEAR, QUARTER TURN ON-OFF OR MODULATING

ON-OFF OR MODULATING

XZ 7 - UNIVERSAL, PROGRAMMABLE  
XZ 8 - PROGRAMMABLE MULTIFUNCTION CONVERTER

XZ 4 - ALARM MODULES

XZ 2 - FULL RANGE OF TWO WIRE SIGNAL  
TRANSMITTERS

MICROCOMET - FLOW COMPUTER, CALIBRATORS

VIBRATION TYPE LEVEL PROBE FOR SOLIDS

A.C. CURRENT SENSOR - UP TO 800 AMPS,  
AT 5000 V, 4-20 MA OUT, ISOLATED

FIREPROOF ENCLOSURES FOR ACTUATORS,  
INSTRUMENTATION AND ELECTRICAL HOUSINGS,  
JUNCTION BOXES, ETC

RANGE OF VALVE POSITION MONITORING EQUIPMENT  
C/W BEACON LOCAL VALVE POSITION INDICATOR

PHONE: (519) 339-9766

FAX: (519) 339-0476

Peterborough  
705-743-6550  
Fax: 705-743-5831

Toronto  
416-675-5656  
Fax: 416-675-6032

## MILTON ROY INDUSTRIES LTD.

PETERBOROUGH, ONTARIO



- Controlled Volume Pumps
- Packaged Chemical Feed Systems
- Coagulant Control Centre
- Electronic & Control Panels

## Auto-Trace<sup>®</sup> Heat-tracing solutions for industrial & commercial requirements

### Rugged construction For demanding environments

CHEMELEX AUTO-TRACE<sup>®</sup> IS RUGGED, WITH SIMPLIFIED ENGINEERING THAT ASSURES LONG-LIFE, LOW-MAINTENANCE SERVICE. WITH MILLIONS OF FEET OF AUTO-TRACE<sup>®</sup> HEATERS IN OPERATION WORLDWIDE, THERE IS AN AUTO-TRACE<sup>®</sup> SOLUTION FOR DEMANDING ENVIRONMENTS.

CONTACT YOUR NEAREST RAYCHEM OFFICE FOR .....TRACECALC.....COMPUTER ASSISTED DESIGN.

CIDI APPROVED  
CHEMICAL CORROSION (ACIDS, BASES, SALTS, WATER)  
OILS AND SOLVENTS / MECHANICAL ABUSE  
SUITABLE FOR CONTINUOUS STEAM EXPOSURE  
HIG-MAINTENANCE AREAS / 9,000 FT. CIRCUIT LENGTHS



The Proven leader

Raychem Canada Limited, 3245 American Drive, Mississauga, Ontario L4V 1N4 1-800-387-3993 Telex 06-983676

Raychem Canada Limited, 3410 - 25 Street N.E., Calgary, Alberta T1Y 6C1 (403) 291-0600 Telex 038-26799

Raychem Canada Limitée, 2821 Bd. Le Corbusier, Chomedey/Laval, Que. H7L 4J5 (514) 682-2141 Telex 05-25471

# #1 SALES ACTIVATOR

WITH THE LARGEST  
PROCESS CONTROL  
& INSTRUMENTATION  
CIRCULATION IN  
CANADA

For advertising information  
call ISA Members

PETER BIRCHARD, RAY BLAIR or  
ROB SOMMERVILLE  
at (416) 481-6483

Canadian

## PROCESS EQUIPMENT & CONTROL NEWS

745 MOUNT PLEASANT RD., TORONTO, ONT. M4S 2N5

Canadian

FOR ADVERTISING, COPY

### PROCESS EQUIPMENT & CONTROL NEWS

EQUIPMENT INSTRUMENTS CONTROLS MATERIALS

#### PROCESS CONTROL ISSUE

Automation Control Systems

Automation Control Systems (ACS) are used in a wide variety of process control applications. They are designed to monitor and control the process, and to provide a means of communication between the operator and the process. ACS are used in a wide variety of process control applications, including chemical processing, pharmaceuticals, and food processing.



Process Control Systems

Process Control Systems (PCS) are used in a wide variety of process control applications. They are designed to monitor and control the process, and to provide a means of communication between the operator and the process. PCS are used in a wide variety of process control applications, including chemical processing, pharmaceuticals, and food processing.



Process Control Systems



Process Control Systems



### TO DETECT, ANALYZE, MONITOR OR MEASURE...

**BACHARACH** Combustible/Toxic gas detection systems.

**BIONICS** Toxic gas detection systems.

**HORIBA** Gas analyzers, Air pollution-Lab & Q.C. monitors, Water quality testers, Ph-meters.

**KURZ** Air/Gas Mass-flow/velocity measurement instruments. Isokinetic sampling systems. Portable velocity/mass flow meters.

**SIEGER** Combustible/Toxic gas detection systems, Process analyzers.



**SSCAN INSTRUMENTS**

DIVISION OF SAFETY SUPPLY CANADA

90 West Beaver Creek Rd., Richmond Hill, ON. L4B 1E7  
(416) 222-4111 Toll Free 1-800 263-5899

Branches Throughout Canada

### HOKE CONTROLS LIMITED



Fluid Control Specialists

2240 Speers Road  
Oakville, Ontario L6L 2X8

**GYROLOK** — Tube Fittings  
— Pipe Fittings

**VACULOK** — High Pressure and  
Vacuum Couplings.

**HOKE** — Miniature, Needle, Ball,  
Bellows Sealed and Check  
Valves. Manifolds, Filters and  
Sampling Cylinders.

**FLUOROCARBON** — Teflon Valves,  
Pumps, Fittings and  
Tubing

**SPANGLER** — Solenoid Valves,  
Actuators and Accessories

**TOMCO** — Quick Connects

For your local stocking distributor Phone  
(416) 827-9807 Fax (416) 827-4507



# GRODYNE CONTROLS LIMITED

#4580 Fieldgate Drive, Mississauga, Ontario L4W 4K4  
Phone: (416) 238-2775 • Fax: (416) 238-2985

**"PROCESS INSTRUMENTATION AND ANALYZER SPECIALISTS"**

## REPRESENTING:

<b>COMBUSTION ENGINEERING PROCESS AUTOMATION BUSINESS</b>	PROCESS CONTROL INSTRUMENTATION, TAYLOR TRANSMITTERS AND CONTROLLERS, TAYLOR MOD 30, INVALCO FLOW METERS AND LEVEL CONTROLS
<b>COLLINS PRODUCTS</b>	AUTOMATIC SAMPLERS FOR POLLUTION CONTROL: — OPEN CHANNEL AND PRESSURIZED LINE SAMPLERS
<b>COMPRESSOR CONTROLS</b>	COMPLETE ANTI-SURGE AND LOAD MANAGEMENT SYSTEMS FOR CENTRIFUGAL AND AXIAL COMPRESSORS
<b>DELTA F</b>	TRACE AND PERCENT OXYGEN ANALYZERS FOR PROCESS AND AMBIENT MONITORING
<b>ENRAF-NONIUS</b>	TANK INVENTORY SYSTEMS
<b>KOMAX</b>	STATIC PROCESS IN-LINE MIXERS, POLYMASTER POLYMER AUTOMATIC BLENDING SYSTEMS
<b>LEEDS &amp; NORTHRUP</b>	RECORDERS, LIQUID ANALYSIS
<b>NEPTUNE METERS</b>	MASS FLOW METERS; INSERTION MAG, VORTEX AND TURBINE METERS
<b>PYROMATION</b>	THERMOCOUPLES, RTD'S, DIGITAL INDICATORS
<b>SENSIDYNE</b>	TOXIC AND COMBUSTIBLE GAS MONITORS
<b>SPECIFIC SYSTEMS</b>	ELECTRONICALLY CONTROLLED MODULAR ENVIRONMENTAL CONDITIONING SYSTEMS
<b>WELKER ENGINEERING</b>	GAS CONTROL VALVES; CRUDE OIL, GAS, AND LIGHT LIQUID SAMPLERS; CYLINDERS, NO- FREEZE REGULATORS, AUTOMATIC INSERTION DEVICES, FILTERS AND FILTER DRYERS, CHEMICAL INJECTORS

**EDMONTON**  
(403) 468-5567  
FAX (403) 468-1871

**CALGARY**  
(403) 250-1538  
FAX (403) 250-1661

**VANCOUVER**  
(604) 439-7040  
FAX (604) 435-8181



**THERMON CANADA LIMITED**  
**HYDE PARK, ONTARIO**

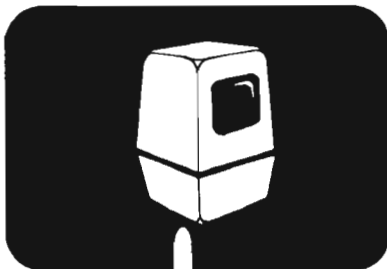
TEL.: (519) 657-3400  
FAX: (519) 657-9030  
NOM 120

*EXCLUSIVE STOCKING DISTRIBUTOR:*  
**PMP INSTRUMENTATION LTD.**

(519) 336-2405

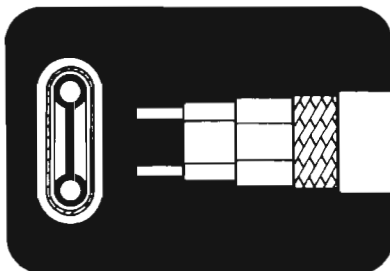
### **INSTRUMENT HOUSINGS**

Thermon's selection of fully engineered instrument housings provides exceptional thermal and mechanical protection for a wide variety of industrial pneumatic and electronic process instruments. These high density, UV resistant polyurethane enclosures are available with complete mounting and installation accessories, including steam, fluid and Division 1 electric heaters.



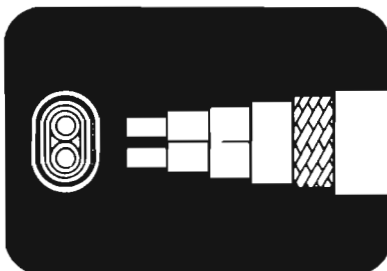
### **SELF-LIMITING HEAT TRACING**

Thermon TSX™ is the first field fabricated, carbon matrix heater continuously rated to 190°C, suitable for pipe freeze protection and temperature maintenance applications. TSX will not overheat, has a low inrush current factor, withstands steam purging and can be installed in ordinary and hazardous areas.



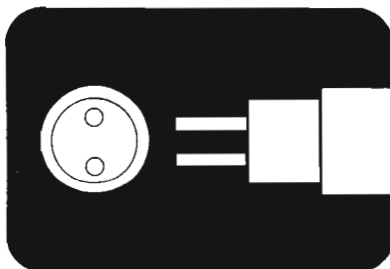
### **CONSTANT POWER DENSITY TRACERS**

Thermon CPD™, constant power density electric heating cable for pipe tracing applications in ordinary and classified areas. CPD has a series of independent thermal zones to produce an even and uniform heat output. This electric tracer has zero inrush at start-up, uses standard line voltages, is easily monitored and is rated to 200°C exposure temperatures.



### **HIGH TEMPERATURE MI CABLES**

Thermon Heatrace™ MI factory fabricated tracing cable for process temperature exposure to 500°C. The high nickel alloy sheath provides excellent immunity to hostile environments and chloride attack. Thermon MI heater sets are 600V rated and CSA approved in ordinary, Class I — Division 1 and 2 (hazardous) locations.



# FLOVAL EQUIPMENT LTD.

250 RAYETTE ROAD, UNIT 1, CONCORD, ONTARIO L4K 2G6  
TELEPHONE: (416) 669-4500, TELEX: 06-96435, 1-800-387-3784

ANNUBAR:	Flow measurement devices, Flow read-out meters, Flow computers, Differential pressure Transmitters.
ARJAY:	Capacitance level probes.
ASCOLECTRIC:	Solenoid valves, Air-operated valves, Check valves. Pressure & Temperature switches.
B.N.W.:	Sluice gates, mud and flap valves.
ESKO:	Kytola Rotameters and Manometers.
DEZURIK:	Plug, Butterfly, Knife gate, 3 and 4-way valves, Consistency Transmitters, Kieley Mueller Process Control Valves, including Globe, Angle, Rotary, and 3-way.
KOMAX:	In-line Motionless Mixers.
MARSH:	Pressure Gauges, Thermometers.
NORTHERN VIBRATOR:	Industrial Vibrators.
SHAN ROD:	Specialty Dampers and Butterfly Valves.
TECHNEQUIP:	Expansion Joints, Pinch Valves, Clarkson Feeders.
WATTS:	A.C.V. (Automatic Control Valves).
WATTS/MUESCO:	Pressure reducing valves - regulation and control of liquids.
WINTER'S:	Pressure gauges, thermometers.



## CANTECH CONTROLS

DIV. OF CANTECH CORPORATION

*Serving industry  
with dependable measurement and control equipment"*

**Sarnia Office and Warehouse**  
242A Indian Rd. S., Sarnia, Ont. N7T 3W4

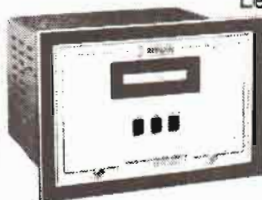
**Phone - (519) 332-6162**  
**Telex - 064-76189**

- Tobar** - Flow, Level & Pressure Transmitters
- W.E. Anderson** - Flow Switches, Ground Continuity Monitors
- F.W. Murphy** - Level, Vibration, Temperature & Pressure Switch Gauges
- Micon** - Microprocessor Based Controller & Control Systems
- Intellitron** - Intelligent Alarm Annunciators
- Skinner** - Solenoid Valves, Spool Valves
- Strahman** - Drain & Sample Valves, Cleaning Stations
- Devar** - Signal Conditioning, Temperature
- 3D Instruments** - Heavy Duty Pressure Gauges
- Hydril** - Turbine Flow Meters
- Halkpen** - Electric Heat Tracing
- Ogontz** - Temperature Control Valves, Steam Traps
- Inicon** - Heat Tracing Control
- Teltronics Inc.** - CRT Based Recorders & Indicators

# The Wizards of Process Instrumentation

## Process Measurement Computers

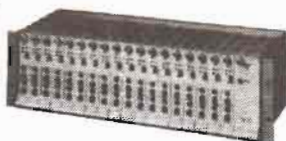
Density, Continuous  
Level Weight  
and Mass  
Flow



Series X96

## Signal Conditioning

Transmitters, Alarm Trips  
and Transmitter/  
Alarm Trips



Series X51

## Calibrators

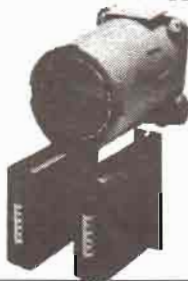
Output and  
Measurements  
mA, mV, Volts  
and Ohms for  
T/C, RTD,  
and mA  
Transmitters



Series X85 & X86

## Transmitters/ Loop Indicators

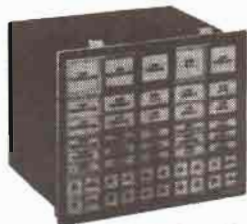
Two-Wire,  
T/C, RTD  
Frequency  
to mA, and  
Linear  
Square Root



Series X54

## Annunciators

Solid State  
and Relays



Series X11, X12, X2 & X3

## Process Monitors

Temperature, Vibration and  
Engineering Units



Series X87

For details on these and other fine Ronan products, contact our headquarters or the representative listed below.

**RONAN**

**RONAN ENGINEERING LTD.**  
32 Bermondsey Road  
Toronto, Ontario  
Canada M4B1Z5  
(416) 752-0310 Telex 069-63662  
FAX (416) 752-8072

**Representative:**

**INDUSTRIAL PROJECTS LTD.**  
100-14 The East Mall  
Toronto, Ontario  
Canada M8Z 5X2  
(416) 252-7368  
Telex 06-984565


3300 Cavendish Blvd.  
Montreal, Quebec  
Canada H4B 2M8  
(514) 489-5769  
Telex 055-66118

# TubeTech LTD.

Instrumentation  
and Fluid Control

829 Phillip Street  
P.O. Box 968, Sarnia,  
Ontario N7T 7K3  
Tel: (519) 344-5271  
Telex: 064-76128

TubeTech Ltd. is founded on more than  
a quarter century of the highest standard  
of customer service and product quality.

- ASCO TRIPOINT  
Red-Hat
- Beckman Industrial
- 
- Parker
- Robertshaw 
- Schrader  
Bellows
- 
-  THERMO ELECTRIC
- TLV
-  WALLACE & TIERNAN



## WESTBURNE

## LYTLE

INDUSTRIAL PRODUCTS DIVISION  
SARNIA



- ASCO** — Solenoid Valves, Pressure and Temperature Switches
- CASH-ACME** — Reducing and Regulating Valves
- CLIF MOCK** — Liquid and Gas sampling systems, Liquid P.D. meters
- DURCO** — Needle valves
- EL-O-MATIC** — Actuators, Positioners, Limit Switches, etc. for Quarter Turn Valves.
- PENBERTHY** — Level Gauges
- SHAND & JURIS** — Tank Gauging, Inventory Monitoring
- VELAN** — Ball Valves
- VANESSA** — Metal Seated, Zero Leakage, Inherently Firesafe, Quarter Turn Valves, and Class IV Butterfly Control Valves

1231 Confederation Street, Sarnia, N3Y 4K8  
Telephone 336-0014 Fax 336-7396



# VALLEY PROCESS SPECIALTIES LTD.

P.O. BOX 37      254 TECUMSEH ST.  
SARNIA, ONTARIO  
N7T 7H8

*Application Engineers*

TEL. (519) 336-9480    FAX. (519) 336-5584

**Valves** - Gate, Globe, Ball & Check, Knife Gates, Butterfly

**Rite Pro** - Wafer Check Valves

**V.P.S.** - Pneumatic Handling Systems: Diverter Valves, Dust collectors

**AERCO** - Domestic Hot Water Heaters  
Steam Control Valves, Heat Recovery Systems

**Hydr-o-Matic** - Pumps: Sewage & Grinder Pumps & Systems

**Grundfos** - Pumps: Condensate & Boiler Feed  
Pressure Booster Systems & Circulators

**Reotemp** - Instrumentation: Dial Thermometers  
Pressure Relief Valves

**S.F.I.** - Flow Measurement Systems



**TRUeline** <sup>R</sup> **VALVE**  
COMPANY LIMITED

**BALL VALVES** - C. STEEL, S. STEEL, & ALLOYS  
- SOFT SEATED, METAL SEATED  
- 150,300,600 ANSI CLASS  
- TEMPERATURES -100°C to +450°C

**GATE, GLOBE, & CHECK VALVES** - STAINLESS STEEL

**KNIFE GATE VALVES** - STAINLESS, ALUMINUM, & ALLOY  
- POSITIVE SHUT-OFF

**VALVE ACTUATORS** - PNEUMATIC, HYDRAULIC & ELECTRIC  
**POSITIONERS** - PMV - PNEUMATIC & ELECTRONIC

**SARNIA - 339-8734**  
**OAKVILLE - 416 - 847-0550**



# C B ENGINEERING

# 1, 55 West Beaver Creek Road  
Richmond Hill, Ontario, L4B 1K5

CB ENGINEERING, WITH OFFICES LOCATED ACROSS CANADA  
IS THE SALES REPRESENTATIVE AND/OR DISTRIBUTOR FOR  
THE FOLLOWING COMPANIES:

## DET — TRONICS

*Headquartered in Minneapolis, Det-Tronics supplies a full line of reliable industrial hazard equipment, including infrared and ultraviolet fire detection and gas detection.*

## IBM

*The complete line of industrial computer products consisting of the 5531, 7531, 7532 and the 7552 (Gearbox). Also included are industrial monitors, printers and ELF data collection terminals.*

## INTELLIGENT

*THE FIX - The "industry standard" software product built for PC monitoring and control.*

*DMACS - Distributed Manufacturing Automation and Control Software released September, 1988.*

*Specifix - a new software product for smaller applications.*

## ITT NEO-DYN

*In Ontario, CB Engineering represents the Neo-Dyn line of industrial products consisting of pressure, temperature, differential and vacuum switches.*

## KAYE

*In addition to providing high - accuracy thermocouple reference systems, Kaye offers integrated process management systems capable of networking up to 16 intelligent process interface units to an IBM Industrial Computer.*

IBM is a registered trademark of International Business Machines Corporation. THE FIX is a trademark of Intellation, Inc.

TELEPHONE NO. (416)-731-0225

FACSIMILE NO. (416)-731-2205

**BAILEY CONTROLS**  
860 Harrington Court  
Burlington, Ontario  
L7N 3N4

Telephone  
1-800-263-9110

# **Bailey Controls**

**Babcock & Wilcox**, a McDermott company

*BAILEY PRODUCTS REPRESENTED EXCLUSIVELY BY*

## **SHARP VALVE & INSTRUMENTATION INC.**

1190 MICHENER  
P.O. BOX 872, SARNIA, ONT. N7T 7J9  
519 - 336-8484

TRANSMITTERS, RECORDERS AND CONTROLLERS  
FOR  
TEMPERATURE, FLOW, LEVEL & COMBUSTION

---

# **SHARP**

## **VALVE & INSTRUMENTATION INC.**

SARNIA — BURLINGTON

*Exclusive Representatives for:*

DRESSER VALVE & CONTROL (CONSOLIDATED) - BAILEY CONTROLS  
HILLS McCANNA - HEX VALVE - MARPAC - SCHRAMM  
KROHNE - COLLINS INSTRUMENT CO.  
ABZ VALVE - BARKSDALE

**PHONE: 519 - 336-8484**

**1190 MICHENER ROAD**

**SARNIA, ONTARIO**

COMPLETE INSTRUMENT REPAIR, FILLING & CALIBRATION SERVICE



## INSTRUMENTATION

### PRODUCTS

461 Scott Road, Sarnia, Ontario N7T 7H5  
Tel.: (519) 337-2329 — Telex: 064-76159  
Fax: 336-0998

<b>BELLOFRAM</b>	- Positioners and Pressure Regulators
<b>B S &amp; B</b>	- Rupture Discs
<b>DELPHIAN</b>	- Gas Monitoring
<b>J-TEC</b>	- Vortex Flowmeters
<b>JACOBY TARBOX</b>	- Sight Flow Indicators and Turbidity Meters
<b>LEAR SIEGLER</b>	- Opacity Monitors and Combustion Analyzers
<b>MAGFLO</b>	- Magnetic Flowmeters
<b>MONITOR</b>	- Bin Level Indicators
<b>NEPTUNE</b>	- Meters
<b>PMV</b>	- Valve Positioners
<b>PULSAFEEDER</b>	- Metering Pumps
<b>PYRAMID</b>	- PVC Covered Copper Tubing
<b>RCS</b>	- Electric and Pneumatic Valve Actuators
<b>SENSOREX</b>	- pH Probes
<b>WESTINGHOUSE</b>	- Combustion Controls
<b>WIKA</b>	- Pressure Gauges

PLUS AUTOMATED  
BALL & BUTTERFLY VALVES



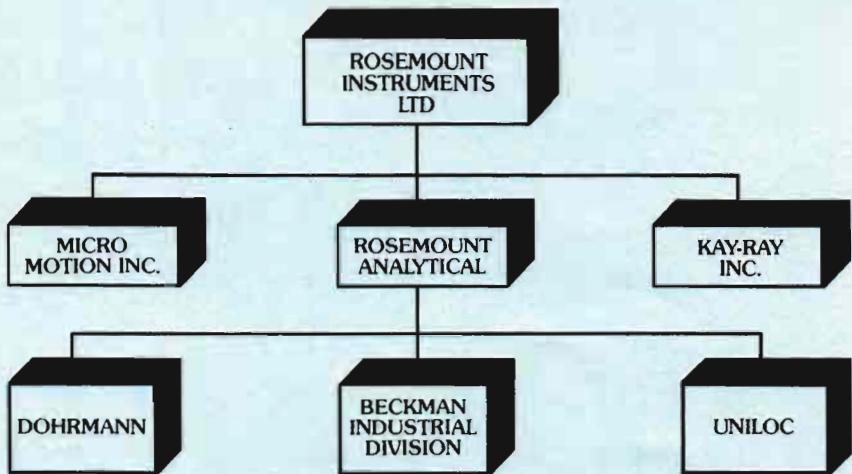
## SRP control systems Ltd.

62 GUIDED COURT  
REXDALE, ONT. M9V 4K6  
(416) 746-0117  
TELEX 065-27418  
FAX: (416) 746-0570

211 GORDON CRECENT  
PRINCE GEORGE, B.C. V2M 4R2  
(604) 561-0622  
TELEX 044-77133  
FAX: (604) 563-4752  
TOLL FREE: 1-800-688-4838

<b>TEMPERATURE</b>	- T/C, RTD & Wells - Transmitter: 2 & 4 wire current voltage, T/C, RTD, frequency; - potentiometer, strain gage; - square root extractor
<b>BARRIERS</b>	- Shunt diode and galvanically isolated barriers
<b>DIGITAL PROCESS INDICATORS</b>	- AC & DC voltage, current, T/C, RTD strain gage, frequency, tachometer and pressure
<b>PRESSURE</b>	- Fully automatic Primary Pressure Standards - Digital Pressure Sds w/accuracy of $\pm 0.005\%$ of reading - CSA Approved, I/S Portable Digital Pressure Indicator/Calibrator - Digital Manometers & Barometers - Pressure Transducers & Transmitters - Low pressure Transmitters - Liquid Level Transducers & TX s - Low cost OEM Solid-State Pressure Sensors
<b>FLOW</b>	- Turbine Flowmeters - Indicators/Totalizers - Liquid & Gas Flow Computers - Positive Displacement Calibrators
<b>LEVEL</b>	- Transducers and Transmitters - Bottom Loading Systems - Overfill Prevention Systems
<b>ANALYZERS</b>	- pH/ORP, Conductivity, Dissolved Oxygen, BTU Analyzers
<b>HUMIDITY</b>	- Relative Humidity Transmitters - Portable Digital Hygro-Thermometers
<b>LOAD, FORCE, TORQUE, DISPLACEMENT</b>	- Load Cells - Force Sensors - Torque Transducers - Displacement Transducers
<b>CONVERTERS/ LOOP ISOLATORS</b>	- P/I, I/P - mV/mA
<b>VIBRATION</b>	- Piezo-electric Accelerometers - Monitoring Systems - Proximity Probes
<b>SIGNAL CONDITIONING</b>	- Instrumentation Amplifiers - Alarm Relays - Transducer Signal Conditioning
<b>RECORDERS</b>	- Digitizers - Transient Data Recorders
<b>DATA ACQUISITION AND CONTROL SYSTEMS</b>	- Low cost 16 Bit Computer Interface - Dynamic Data Acquisition and Recording Systems - Multichannel Transient Acquisition Systems

# The Rosemount Family...



## Providing Solutions .....

- FLOW
- PRESSURE
- LEVEL
- TEMPERATURE
- ANALYTICAL
- CONTROL

### **Rosemount** INSTRUMENTS LTD

110 East St. South, Sarnia, Ontario N7T 3R1  
Telephone (519) 339-9701 Telex: 06-960152 Fax: (519) 339-9702

