



Providing Instrumentation Solutions to Industry Since 1975

- ★ **SA-77 - Sampling Systems**
- ★ **Autrol America - Smart Transmitters**
- ★ **Dri-flo II - Chart Recorders**
- ★ **OKC Products - Well Head Controls**
- ★ **HLR Controls - Pneumatic Hydraulic
- Pressure Safety Controls**
- ★ **Safety Systems Technology
- Gas & Fire Detection Systems**



Peterson  Instruments 

About Us



Peterson Instruments was formed March 25, 1975 in Camrose Alberta. The business prospered as a service and construction company with oil and gas measurement and control contracts throughout western Canada. In 1988 Peterson Instruments branched into sales with the successful negotiation of exclusive Canadian distribution agreements for the Calcon product line (since acquired by Amot Controls (tm) in 1996), followed by the Sonceboz Swiss timing device product line. With these two successful product lines and the purchase of the intellectual properties and rights to production of the Dri-Flo II(tm) orifice flow recorder product line from American Meter (tm) as well the rapid growth of the SA-77 Produced Oil sampler that was developed by Peterson Instruments, it was apparent that a larger warehouse in a more internationally central location would be required. In 1992 Peterson Instruments opened the Calgary Alberta Canada operation's center as a sales, distribution and manufacturing facility. After several moves and relocations to bigger and better suited facilities within Calgary it has resided at the current location since 2002.

With management possessing over 80 years of combined industrial instrumentation expertise our product lines continue to grow and diversify but our priority of customer service remains paramount as it has since our inception in 1975.

SA-77 Samplers

SA-77 Automatic liquid Sampler

Available in two configurations to accommodate either a constant air supply or an intermittent air supply. The SA-77 is a purpose built sampler designed by instrument technicians & engineers familiar with the rigors of oil production testing requirements.

- All 316 SST wetted hard parts available in a variety of seal types
- Standard unit is H₂S rated to 3%
- MAOP: 750 psig std or 1440 psig optional
- Available with glass or plastic sample receivers (2 included)
- Few moving parts means easy and low cost maintenance
- Pipe / wall / stand mounting bracket included
- Variety of sample probe options available included in cost.



ABSA Registered

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Autrol America Transmitters

Autrol Transmitters are micro-processor based "smart transmitters" featuring 2-wire loop powered 4-20mA outputs which support the digital HART communication protocol. Allowing seamless integration with a host control system (DCS, PLC, SCADA, AMS etc.). Used in all industries: Water & Wastewater Treatment, Chemical & Petrochemical, Oil & Gas, Pulp & Paper, Food & Beverage, Pharmaceutical, Energy & Power, Biofuel and Alternative Fuel processes.

APT3100 - Differential, Gauge, Absolute, Highline Pressure Measurement

APT3200 - Gauge, Absolute Pressure Measurement

APT3100L - Diaphragm Seal Differential Pressure measurement for level

APT3200L - Diaphragm Seal for pressure measurement

ATT2100 - Indicating or non indicating local temperature transmitter

ATT2200 - Blind rack mount remote temperature transmitter

- Available with or without 5 digit LCD Display.
(except ATT2200 which are rack mounted temperature transmitters.)
- Units with 5 digit LCD display can be configured without HART communicator via a simple menu driven process.
- Excellent long term stability
- High rangeability (100:1)
- Zero Point Adjustment
- High Accuracy: 0.075% of calibrated span (0.04% optional on certain models)
- Various Output: 4-20mA and digital signal
- Flexible Sensor inputs,
Pressure units: DP, GP, AP, HP, Vacuum.
Temperature units: RTD (2, 3 or 4wire) Thermocouple (B, E, J, K, N, R, S, T types),
mV (10-75mV), Ohm (0-430Ω)
- Programmable Parameters: Zero/Span, Fail-mode, Unit, Trim, etc.
- Continuous self-diagnostic function
- Automatic Ambient Temperature Compensation
- EEPROM write protection
- Fail mode process function
- DP units have front $\frac{1}{4}$ " FNPT process connection std
(multiplanar units available) with mounting holes drilled and tapped
for $\frac{1}{2}$ " FNPT adapters or direct manifold mounting.



HART
COMMUNICATION PROTOCOL



Safety Systems Technology

Safety Systems Technology manufactures a full line of fire detection, alarm and suppression systems and gas leak detection systems.

The SST Model GC801 Combustible Gas NOVA-Sensor® and the GT811 Toxic Gas NOVA Sensors are completely self-contained device that measures and displays the concentration of gas accumulated in a protected area, performs local control functions, and optionally transmits this information to a central control point.

The SST Model F110 Ultraviolet Detector is a sophisticated, self-contained, optical flame detection system with many features not available in competitive detectors.

- ♦ Flame Sensor and Control Electronics self-contained in explosion proof enclosure
- ♦ Automatic and Manual Optical Path Checking
- ♦ Automatic Self Test Diagnostics for electronics and sensor elements
- ♦ Analog and Discrete Outputs
- ♦ High current relays for control or shutdown of external equipment.

Watson Gloves

As an instrument company in Western Canada for over 30 years we are always on the lookout for other great Canadian companies that provide superior products and services. And when we needed work gloves that afforded our staff the protection they deserved along with the dexterity that Industrial Instrumentation requires we found the Watson BlackHawk GL-380. Now we carry the whole Watson Workglove Line.

OKC Products

OKC Products® designs and manufactures a wide variety of wireless controllers, valves, sensors and counters for an equally wide variety of purposes in the oil and gas industry.

Featuring SunSmart technology, the compact the **TimeMate** pipeline electronic timer provides an easy to use, low maintenance solution for well head, production equipment, or pipeline control. The TimeMate is factory programmable for basic timer, high/low switch control or plunger lift operation.

Our **PumpMate** multi-function well head controller is equipped for a wide range of uses, whether the application is for a basic, reliable well intermitter or a full feature, automated well control system. Standard equipment includes four sensor inputs that provide dual function sensing for switch gauge control or direct sensor readout and control. Single or dual pneumatic valve or electrical relay output control completes a hardware suite to meet well head or production control requirements. With "plug and go" options, one controller is all you'll ever need for the life of your well.

The **TripMate** magnetic induction switch penetrates through metal and non-metal materials to sense metal objects moving past the switch. Rugged and durable, the TripMate is the perfect solution for industrial applications that require plunger arrival sensing, piston stroke counting or tank level gauging. The industry standard for reliable, easy to install plunger arrival sensor.

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HLR Controls Ltd.

HLR Controls manufactures over 300 different pneumatic/hydraulic Safety System Control components and instruments. Designed to meet the tough applications found in the Oil/Gas, Water Treatment and Petro-Chemical industries. HLR instruments allow facility operators to identify and provide a specific control response. Prompt customer service, quality products and quick deliveries are the cornerstones of HLR Control's success. Our Product Group components include:

Pressure Sensors

The model 7970 pressure sensor is a heavy duty pneumatic or hydraulic switch that can sense pressures ranging from 10 to 10,000 psig - in 1 switch, no extra parts are needed. Definitely our most popular switch. The wide range of set-points is achieved through four separate operating ranges, no extra parts are required to change ranges just following the piston reconfiguring instructions. Accept no substitutes, accept no copies or counterfeits, this is the original and this is the best!!

The HLR 5000 High/Low Pressure Shutdown with Relay

A "Turn Key" Single Well Safety System!

In response to many customer request for a "ready to install" safety system, HLR are offering this "turn key unit." HLR Controls has taken a 7970 Pressure Sensor Set (PSHL) and an HLR 150-14FM Manual Reset Relay (MRR) and tubed it up in a typical single well hook-up configuration.

The HLR 5000 single well safety system is factory assembled by a trained technician. This allows you, the customer, to simply take the unit to a location and install it into an isolation valve or process connection and hook up the Inlet and Outlet connections to put it in service.

Other HLR Products:

Automatic/Manual Reset Relays Models: 150-14AM / 150-18AM

- Two position, three way normally closed, both automatic and manual pilot pressure operated flow control valves

Dual Pilot Flow Control Valves

- Two position, three, and four way models available, pilot pressure operated, flow

Manual Reset Relays Models: 150-14 / 150-18 / 7810-3 / 7810A

- Two position, two, three, and four way models available, pilot pressure operated, manual positioning (for operation), flow control valves



Dri-flo II®

Dri flo II recorders provide an accurate continuous record of conditions for both gas measurement and process monitoring purposes.

The Dri - Flo II meter is used for the accurate measurement of flowing gas, including wellhead and pipeline gas, as well as liquid or steam. It operates by measuring the differential pressure of the gas or liquid across an orifice plate, flow nozzle or venturi flow tube. It can also be used to measure tank liquid level by measuring the hydrostatic head pressure created by the liquid.

The case and door are rugged die-cast aluminum covered with a textured polyester powder-coat finish for protection from industrial and environmental extremes. A continuous foam gasket insures dust and moisture proof protection of the chart, chart drive, and other components inside the case. The door has a full length aircraft type hinge for easy opening and long service. All Dri - Flo II recorders feature a chart plate that is easily removed by simply disengaging two snap buttons. A variety of chart drives, rotation speeds and pen types are available.

Recorder Parts and Accessories

Range Springs - Made in house to reduce costs, we pass those savings onto you. Stocked ranges of 0-20", 0-50', 0-100", 0-200", 0-300", and 0-400" W.C. We stock sour service application range springs only.

Static Elements - Our replacement static element are made to similar standards as the originals at a fraction the cost. We stock large quantities of pressure ranges up to 0-10,000psig. Ranges up to 20,000psig available on special order.

Temperature Elements - We can custom make almost any length and range of thermal systems. With our standard large stock being of 0-150F x 10 foot long armored capillary, in the case compensated type, VB. Ask about our third pen kits with everything you need to add the temperature measurement option to your recorder.

Instrument levelling Saddles - Our saddles are cast steel for extraordinary strength while retaining the ability to be produced economically. We stock 2, 3, 4, 6, 8, 12" leveling saddles with a 2" FNPT outage fitting. We also stock the outage pipe in lengths of 24".

Sonney Orifice Computers - The Sonney Orifice Computer was developed by K.J. Sonney and Produced originally by Willsonn Computers from Little Hocking Ohio circa 1958. It is the industry standard for spot checking orifice metered flow rates. Easy to use and reliable it is still a 'must have' tool for every gas and oilfield production engineer, operator and supervisor. It is defined as a computer because it is in actuality a slide rule.

Available online at: [amazon.com](https://www.amazon.com).

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Orifice Plates

Peterson Instruments' **Orifice plates** are made in house. We use only the finest 316 sst and machine them to meet AGA-3 MR 01-75 specifications. Each plate has its heat number, bore, OD and material spec engraved and not hot stamped or acid etched to ensure this information on the outer edge is clear and legible for the lifetime of the plate.

At our Calgary warehouse we stock thousands of plates in all of the cat 500 bores for run sizes 2", 3", 4", 6" and some 8" plates. We stock cat 520 plates in all bores for runs 2", 3" and 4".

We stock all seals for orifice fittings in sizes up to 8" and in a variety of materials. Other sizes are available on request.



Bellows

We repair in-house for purchase or exchange the Barton Type 199 differential pressure units. Every unit gets new zinc dichromate electroplating as well as brand new and never before used convolution assemblies.

The most common units that stocked are of the 2500 PSIG SWP specification. We keep units ready to ship in numerous differential pressure ranges including: 0-20", 0-50" 0-100", 0-200", 0-300" and 0-400" Water Column ranges

Peterson Instruments also stocks the 1000SWP model 199 units and the hi differential units for ranges up to 75psig differential.



Charts and Pens

We stock* a wide variety of charts and pens (series 39 pens and series 72/79pens) in Graphic Controls and Dri Flo Iltm Brand for various makes and models of mechanical and electronic recorders. For price and delivery of charts and pens for non-gas measurement industrial recorders please call or email us as we stock too many to list here and our stock is changing daily. Graphic Controls pen description and pen part number system explained here...

When ordering pens they can be ordered by OEM pt #, Graphic Controls pt#, or Dri Flo II pt#.



*Peterson Instruments is a Canadian and offshore distributor of Graphic Controls® Industrial Marking Products not the manufacturer of these products.

Toll Free 1-800- 677-7993
www.petersoninst.com
www.petersoninstruments.com

Please visit our website for more information to help you make an informed engineering decision.



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Pressure Conversion Table

To Obtain	Multiply	By	Psig	kPa	Bar	" WC	"Hg
Psig	1		1	6.89475	0.0689	27.6807	2.03602
kPa	0.14503			1	0.01	4.0147	0.2953
Bar	14.50377			100	1	401.474	29.5299
Inches of Water ("W.C.) (@4°C)	0.03613			0.2491	0.00249	1	0.07355
Inches of Mercury ("Hg) (@0°C)	0.49115			3.3864	0.03386	13.5954	1

Volume Conversion Table

To Obtain	Multiply	By	CF	MCF	m ³	E ³ m ³	USGal	ImpGal	bbl (Petroleum)
Cubic Feet (Ft ³)(CF)	1		1	0.001	0.028317	0.0000283	7.4805	6.2288	0.178107
ThousandCubic Feet (MCF)(¹)	1,000			1	28.31685	0.028317	7,480.519	6228.84	178.1076
Cubic Metres (m ³)	35.31467			0.035314	1	.001	264.17	219.969	6.2898
E ³ m ³ (l)	35,314.667			35.31467	1000	1	264,172.05	219969.25	6289.8108
U.S. Gallons (US Gal)	0.13368			0.00013	0.003785	0.00000379	1	0.8326	0.02381
Imp Gallons (ImpGal)	0.16054			0.0016054	0.004546	0.00004546	1.201	1	0.028594
Petroleum Barrels (bbl)	5.6146			0.00561	0.15898	0.00015898	42	34.9723	1

¹ does not follow proper SI nomenclature. Uses industry terminology. // l = also known as tradename: "dec" (pro: dek)
 1bbl (petroleum) = 1.333 U.S. bbl = 0.97145 UK bbl = 42 US Gal = 34.9723 UK Gal

31	32	33	34	35	36
30	29	28	27	26	25
19	20	21	22	23	24
18	17	16	15	14	13
7	8	9	10	11	12
6	5	4	3	2	1

Sections within Township

13	14	15	16
12	11	10	9
5	6	7	8
4	3	2	1

LSD Within Section

