

talkline

6 Food and Beverage Manufacturing

Find savings and increase
your competitive position

10 Oil and Gas Production

Safe and efficient operations

8 Compliance, Efficiency, Budget

Meeting industry needs



Index

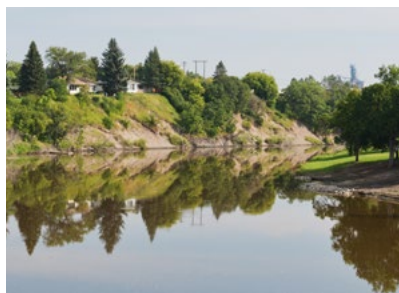
6 Food and Beverage Manufacturing

Endress+Hauser is committed to helping Canadian food manufacturers find savings and increase their competitive position.



8 Water and Wastewater

Endress+Hauser continues to focus on the analytical measurement needs of the water and wastewater industry.



10 Oil and Gas Production

Partner with Endress+Hauser for solutions that result in safer and more efficient operations.



4 We've Moved!

Our Facebook and LinkedIn sites have new addresses. Plus a chance to win a BOSE bluetooth speaker.

12 About E-direct

E-direct is a fast, effective direct purchase channel to 100% Endress+Hauser quality products at the best price.

14 E-direct Products Spotlight

Check out the benefits of these eight featured products, then order directly online.



Season's Greetings ★ Meilleurs Vœux

We wish you a Merry Christmas and a Happy New Year with an abundance of success in 2017!

Our valued friends, customers and business partners

Dear Reader,

Welcome to our final issue of *Talkline* for 2016! Once again, another year is about to pass us by. As we head into winter and the holiday season, all of us at Endress+Hauser Canada extend our best wishes to each and every one of you. May your Christmas and holiday season be safe and full of warmth, family and friends.

In this fourth and final issue for 2016, we remind you to participate in our social media contest. As our social profiles for both Facebook and LinkedIn have moved, we want to make sure we don't lose the great community of followers we have. So we'd like you to migrate over to our new social profiles. What's in it for you? Migrate over to our new profiles, Like and Follow us before December 31, and you'll automatically be entered into a draw for a Bose Soundlink Bluetooth speaker. Now there's an incentive to keep our valuable community together! Good luck with the contest!

We are also extremely proud to have been recognized by Frost & Sullivan with the 2016 Global Company of the Year Award for Water Analysis Instrumentation. If water or wastewater factor into your processes, look to us for award-winning liquid analysis products, services and solutions.

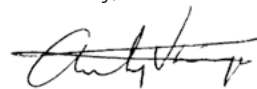
Also in the pages ahead, we get a brief recap from our product/industry managers. They review highlights from the past year and then tee up what's in store for 2017.

As our year end approaches rapidly, I wish to thank each of you for the opportunity you provided us this year to serve you and I hope we exceeded your expectations. We realize that you have the choice to do business with anyone and we must earn it. In a world where product differentiation becomes more and more difficult, we at Endress+Hauser are focused on identifying differentiated value for our customers that sets us apart from the competition. My belief in this commoditized world is that one of the few differentiators that remain is the customer experience. We all know what good looks like from our personal purchases and those stores or websites that we love to use. It is because of the experience that we feel value for the money we spent. That is a major focus within our organization not only locally but globally and we have started the journey to ENSURING that you, our customer and partner are truly FIRST.

The definition and importance of quality is taking on a new meaning within our company that far transcends the traditional view of product quality. We are looking at quality as meaning everything we do. How fast, efficient and effective we are in serving you is a major part of quality and the quality of our internal processes. We know it can be difficult to navigate through departments in any organization and we have started the journey of value stream mapping our Canadian organization across all functions starting from outside in. We have identified the four processes within the company that more than 80% of our customers encounter and will be revolutionizing them from "quote to cash" across all internal departments/functions to lean out any inefficiencies or waste that do not add value to YOU. The quality function within Endress+Hauser Canada now reports directly to me and I consider this activity one of, if not the most important goal we have to accomplish in 2017. It is clear, we need to be the best company you do business with and ensure that you see quality in every aspect of your interaction with us.

As you establish your goals and priorities for 2017, look to us to help you be as efficient and competitive as possible.

Sincerely,



Anthony Varga
President and CEO



We've moved!



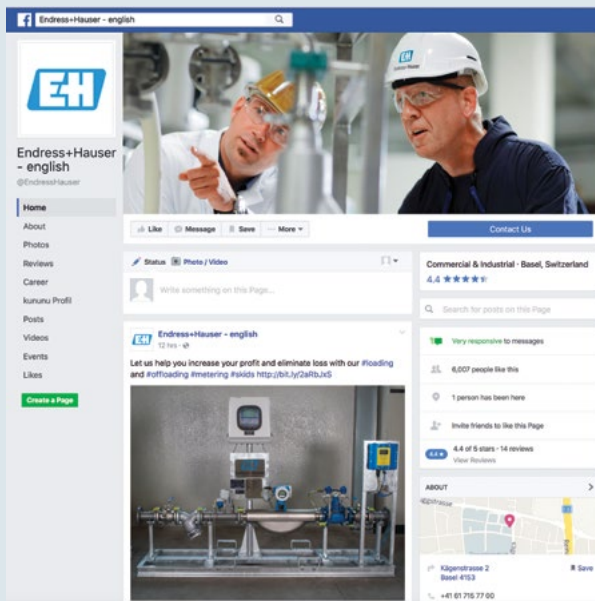
us for a chance to **WIN** a BOSE Soundlink Bluetooth Speaker



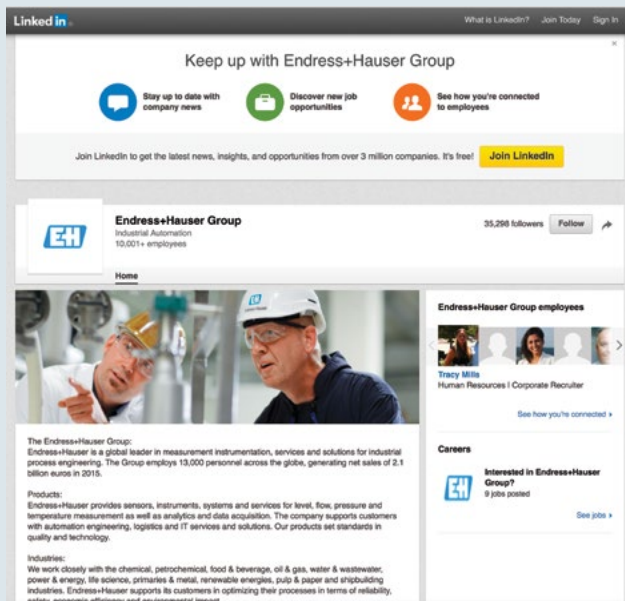
2 Networks – 2 Chances to WIN!



facebook.com/EndressHauser



linkedin.com/company/endress-hauser-group



"Like" and "Follow" Endress+Hauser in our NEW Facebook and LinkedIn locations between September 5 to December 31, 2016 to be automatically entered in a draw* for a chance to **WIN** a BOSE Soundlink Bluetooth Speaker.



Full rules and regulations:

www.ca.endress.com/Endress-Hauser-Group/BOSEcontest

*Not valid in Quebec.
Some restrictions apply.



Trade Shows 2017

January 29–February 1	Manitoba Water & Wastewater Association, Portage La Prairie, MB
March 13–17	Alberta Water & Wastewater Operators Association, Banff, AB
March 15–16	CsHm Calgary, AB
March 21–23	AMERICANA 2017, Montréal, QC
April 2–4	WEAO Technical Symposium & OPCEA Exhibition, Ottawa, ON
April 19–20	ISA Calgary, with Rockwell Automation, AB
April 23–26	Maritime Provinces Water & Wastewater Association, Halifax, NS
May 7–10	Ontario's Water Conference & Trade Show, Niagara Falls, ON
May 28–30	BC Water & Waste Association, Victoria, BC
June 21–22	Atlantic Canada Petroleum Show, Saint John's, NL
July 19–20	Rockwell Automation On The Move, Toronto Congress Centre, ON
October 15–18	Atlantic Canada Water & Wastewater Association, Charlottetown, PEI
October TBD	CsHm Grand Prairie, AB
October TBD	Northwestern Ontario Water & Wastewater Conference, Thunder Bay, ON

Food and Beverage Manufacturing in Canada

By: Stephanie Stevenson, Food and Beverage Industry Manager, Endress+Hauser Canada Ltd

The food and beverage industry is the largest in the world, and Canada's second-largest industry with more than 4,000 manufacturers. This sets the framework for an extremely competitive playing field. As we move into 2017, food and beverage manufacturers will have to continue their longstanding struggle to remain competitive. Small- to medium-size companies are facing significant challenges to remain profitable, as large companies continue to consolidate production sites and increase efficiencies in the face of globalization and competitive pressures.

Within Canada, internal food and beverage growth forecasts for 2016 were a modest 2.1%, and as a result, food manufacturers could be seen tapping into opportunities south of the border. Taking advantage of these opportunities has come with increasing challenges. Canadian food producers exporting to the USA are now faced with increasing food safety rules such as audits by the FDA under the Food Safety Modernization Act (FSMA). With this we have seen a trend towards increased third-party calibrations and the use of online portals to keep the certificates organized and searchable according to the plant layout during audits.

Looking ahead

In moving towards their profitability goals, we see our customers investing in inline quality monitoring equipment. Measuring quality parameters in real time rather than waiting for lab results is helping to reduce off-spec product, which has the effect of reducing costs and increasing quality. Some examples are projects around maintaining batter consistency for coated foods and measuring the sugar concentration of drinks in real time.

The increasing capability of instruments to provide additional data is opening up new possibilities for process related monitoring. An example would be the detection of build-up within flow instruments to initiate cleaning cycles, or the onboard verification of instruments to enable proactive maintenance.

New instruments are now smarter, and include more integrated diagnostics, such as heartbeat monitoring. These new instrument capabilities are part of the technology progression associated with Industry 4.0 and the Industrial Internet of Things (IIOT). Companies



have been looking for easy to install and maintain communication protocols to leverage the available data. We have seen a substantial increase in the number of companies utilizing Ethernet communications in new instrument installations.

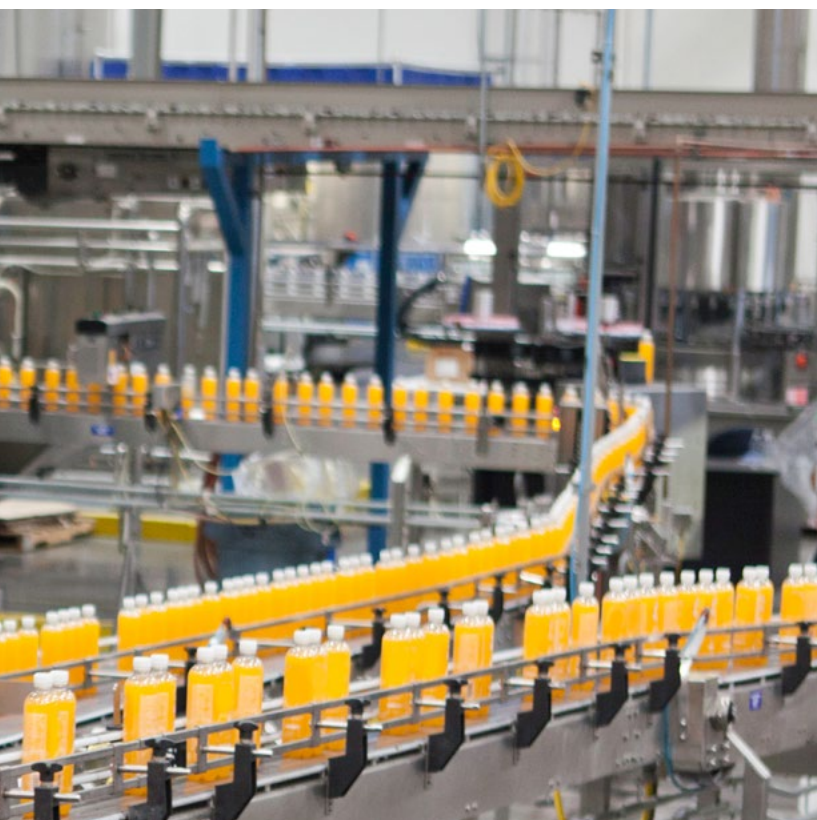
Another cost pressure facing manufacturers comes from water and energy consumption. In 2016 there was an increase in the monitoring of water consumption in individual areas of the manufacturing plants to create data trends for the purpose of identifying consumption issues and implementing proactive measures to reduce them. Along with increased monitoring, there was also much scrutiny on the use of water within cleaning processes. The optimization of clean-in-place (CIP) systems through the use of optical instruments for faster phase separation, incorporation of burst rinsing cycles, and installation of water reuse tanks was seen as a result. The focus on managing resource costs, especially water usage is expected to continue through next year and quite possibly beyond.

Cleanability of instruments can also contribute to (or reduce) cleaning times, water usage and microbiological threats.

This is fueling a move towards flush mount weld-in fittings on tank mount installations, and flush flow through fittings such as Variline fittings with Varivent process connections on instruments – to eliminate the traditional standoff seen with tri-clamp instrument connections.

Trends to address

The Ministry of Environment in Canada is responsible for ensuring that companies are discharging wastes within the set guidelines and we have seen an increase in their activity and enforcement levels. This has resulted in many companies feeling the pinch of fines for discharging over biochemical oxygen demand (BOD) limits or for being outside of the acceptable pH range. This has stirred a move towards closer scrutiny of waste treatment processes and effluent monitoring.



Endress+Hauser and You

Endress+Hauser has been active with customers in 2016, helping them meet these effluent monitoring challenges with solutions for effluent sampling, correlation of optical measurement to BOD/total organic carbon (TOC) loads for real-time trending of normally offline measurements, as well as remote monitoring of triple redundant pH systems and reactive technician support to ensure continual effluent compliance. Redundant remote monitoring systems have been demonstrated to result in the successful elimination of effluent fines and issues.

The possibilities for food and beverage manufacturers to leverage new technologies and instruments are quite diverse. Time and money invested will have a good return on investment as it will enable savings on many fronts including water use reductions, product loss reductions, and reduced plant downtime. We are looking forward to the challenges of 2017 and are committed to helping Canadian food manufacturers win the battle to find savings and increase their competitive position.



Water and Wastewater in Canada

By: Dean Rudd, Analytics Product Manager, Water and Wastewater Industry Manager, Endress+Hauser Canada Ltd

Compliance, efficiency, budgets — these are the words on the minds of all water and wastewater industry people throughout Canada. These have always been the three pillars used in the industry to plan new operations, optimize existing operations and make tax payers happy. Let's look at the state of each in 2016.

Compliance. This has always been the driving force behind changes in the industry. On the drinking water side, the key has always been safety first. We have seen debates on the use of fluoride in the water supply and the need for clean water in many remote communities. 2016 saw new money from the federal government to help small and remote municipalities provide for their residences. On the wastewater side is where we've seen the fastest changes in compliance requirements. The federal government has added new regulations focusing on nutrients such as phosphorous and nitrogen. The requirement for critical plants to have secondary treatment by the year 2020 has caused several jurisdictions to move on upgrading these existing plants. In the West (Vancouver Island), we see great progress on new facilities for that region. We are also seeing a renewed focus on industrial wastewater, especially when they discharged into municipal sewer systems. Many

industries like food and beverage for example, are facing larger surcharges for non-compliant wastewater.

When we look at efficiency we see two stories. One on the need for better nutrient removal (phosphorous and nitrogen) and the second, more focus on energy optimization. Most people do not realize that in most communities the wastewater treatment plant is the highest user of electricity of any industry. Nationally, wastewater treatment uses almost 3% of all the electricity produced. Even a small plant can easily have an electricity bill of more than \$1 million per year. Waste plants are looking at all avenues to reduce energy consumption. Two key areas they are looking at are aeration optimization (reducing the amount and cost of producing the air) and the use of biogas produced in the digesters. At Endress+Hauser we are working with customers in both these areas.

Budgets. These are being stretched further and further. The reductions to various government budgets have required the development of innovative ways of providing services to the public. One bright note is that the federal government seems to have a focus on infrastructure spending, which will certainly find its way to the water and wastewater industry.

Looking ahead

If we consider the three pillars of the industry, we see some very interesting and exciting trends. The industry is looking to do more with what they have physically, meaning they need to optimize their processes and this means more automation with additional reliance on better information systems. Compliance is driving the industry to make online measurements where only lab samples were used in the past. And when we look at budgets as mentioned earlier, they are looking at new funding models and new ways of delivering services, like out-sourcing.

Trends to address

One of the very interesting trends on the wastewater side of the industry has been the increasing concentration of the inflow to the plants due to water conservation. The public has embraced the idea of water conservation and this is creating a real challenge to plant operations. The sewers and plants were mostly designed to work with higher water flows and less concentrations. One region in Southern Ontario is actually looking to give incentives to attract industry to increase the amount of water in the system to help make the plant work more efficiently. I think this will help grow the region and contribute to creating a new cooperation between industry and municipalities, offering a true win-win situation.

As we all know, we are now deep into the digital and information age, with the pace of change increasing every year. This is a challenge for an industry that is normally very cautious and is slow to change. Another new trend is the change this thinking brings about, allowing for the adoption of new technologies at a much faster pace – as the instruments used to measure and control the processes are getting smarter every year. It is not uncommon for engineering to ask for new communications tools like Bluetooth or built-in web servers. Many meters today are required to perform high-level diagnostics and on-board verifications. These tools are changing the way maintenance is planned and executed.

Smarter instruments are also impacting the budget side of the industry. We always get the question, “Are these smarter instruments going to cost me much more?” But this is not the case. Almost all instruments now have sophisticated diagnostics, digital communication (HART, Profibus, Ethernet I/P) and built-in verification tools (at Endress+Hauser we call this Heartbeat Technology™).



CA80 Liquiline Analyzers

CM44 Liquiline Transmitter

Endress+Hauser and You

In 2016, our focus in the industry was on wastewater and the optimization of the aeration process and effluent monitoring. This introduced many customers to our award-winning Liquiline platform of analytical instruments.

Frost & Sullivan recognized Endress+Hauser as Global Company of the Year for liquid analytical products, as you have seen in this magazine. So in 2017 we will continue to focus on all the analytical measurements needed for the water and wastewater market, with a keen look at our new CA80 line of colourimetric analyzers (parameters like ammonium, ortho-phosphate, nitrite and more).

Looking forward, we are encouraged as the industry continues to move faster towards optimizing the efficiency of processes, and working hard to meet tougher regulations, while providing the essential services we all take for granted.



Oil and Gas Production in Canada

By: Peter Muras, Oil & Gas Industry Manager, Endress+Hauser Canada Ltd

It is no secret that the past year has presented the traditionally resilient Canadian oil and gas industry with many challenges. It is not just the drop in global oil prices but the duration of these conditions that is causing end-users and their partners to reconsider how they do business. Add to this, limited pipeline capacity out of Alberta and regulatory initiatives like the carbon tax, and it is no wonder investment in this industry has slowed down. Nevertheless, this challenging environment has created an interesting dynamic – our customers realize that although they may not control the price of what they produce, they can control how efficiently they run their operations. Yet this efficiency cannot come at the expense of safety; and it is precisely this intersection of efficiency and safety where Endress+Hauser's portfolio of equipment, solutions and services provides the unparalleled value and safety our customers require.

This past year has been busy. In 2016 Endress+Hauser Canada launched a tank gauging solution – an inventory

management system combining state-of-the-art level and temperature measurement with webserver technology, which makes access to tank data easy. Customers are able to increase profitability by maintaining control of gains and losses. Automated proof-testing ensures continuous, safe operations. The result – reliable and safe, high-accuracy tank gauging, with lower capital and operational costs.

Customers have also been reaching out for solutions to prevent tank overfilling and to protect their pumps from running dry when there are low levels in their tanks. Endress+Hauser's solution is the Liquiphant vibronic level switch, which we developed over 30 years ago and which is a keystone of any responsible overfill prevention and pump protection system. With continuous diagnostics running to ensure the forks are vibrating at the appropriate frequency, push-button proof testing and safety ratings up to SIL 3, Liquiphant is a robust alternative to mechanical level devices. Exchanging them for vibronic level switches can be quite straight forward –



we believe it is time for all players in this industry to move on from the mechanical devices of old.

Looking ahead

Looking to 2017, we see light at the end of the tunnel with customers looking for new growth opportunities. With the price of crude oil stabilizing and projected to rise, drilling activity is set to increase. Although we have a way to go before seeing the kind of oil sands development activity we saw just a few years ago, there is still considerable growth in the industry, but within natural gas. The Montney and Duvernay formations hold larger reserves of shale gas than the Marcellus in the United States which turned the global natural gas market on its head.

Endress+Hauser has the right solutions to support end-users, OEMs and EPCs as they work to develop this prolific natural gas resource in Alberta and British Columbia.

Trends to address

We know that water recycling is an important part of your process. The regulators do too. In 2016, Endress+Hauser received the Global Company of the Year Award for Water Analysis Instrumentation from Frost & Sullivan, a respected US-based consulting firm which provides strategic and market research services. We were honoured by this distinction but we were not surprised. Endress+Hauser samplers, transmitters and analytical sensors, like those used to measure pH and conductivity (the latter being used to measure salinity) have long met the highest specifications, including those of the natural gas industry. Patented Memosens technology transforms the way you calibrate these sensors. A quick twist and they can be replaced with new ones, while the used sensors can be calibrated in the safety of the lab.



Levelflex FMP54

Endress+Hauser and You

Processing natural gas and associated liquids brings with it many other challenges. One of our customers, a large natural gas producer, struggled with rag layers in their separator and sand entering into their process. This resulted in numerous downtimes which added significantly to operating costs – that was until Endress+Hauser recommended the use of the Levelflex FMP55 guided wave radar with SensorFusion, which combines capacitance to determine the relative thickness of rag layers. This knowledge allowed the customer to optimize the function of the separator and any needed demulsifier. The customer's experience changed from almost daily downtime to virtually none at all and the savings in operating costs were plain to see. It is exciting that this application is effective and repeatable in so many of their other operations sites!

These are just a few of the examples of ways that Endress+Hauser partners with customers for solutions in oil and gas that result in safer and more efficient operations. More uptime means more revenue for your stakeholders and less impact on the environment.

Whatever your project or application, we have a solution. We look forward to partnering with you so that you can be as competitive as possible in the markets you serve!



Come visit us in 2017! See page 5 for a list of shows and events that we're attending.

E-direct

High Quality – Low Price!

About E-direct

What is E-direct?

E-direct complements the traditional range of products from Endress+Hauser. Certain instruments do not require a vast amount of consultation in terms of application and price – that's where E-direct can help. It's a product portfolio that offers simple product selection and fast delivery at an affordable price.

Who is Endress+Hauser?

Endress+Hauser is a global leader in high quality and innovative measurement instrumentation, services and solutions for industrial processes. With dedicated sales centers and a strong network of partners, Endress+Hauser guarantees competent worldwide support.

What does E-direct offer me?

- Simple product selection
- Value for money
- Transparency thanks to quantity discounts being displayed
- Short delivery times
- Exchange of defective instruments

How can I place an order?

You can place your order with us online or by contacting our sales office at 1-800-668-3199

How can I pay?

You can pay online using a credit card (MasterCard, Visa) or by purchase order number with pre-approved

credit. Orders paid by Credit Card will be process immediately. Orders purchased on pre-approved credit will be invoiced with terms.

Invoicing for current customers

If you have an established account with Endress+Hauser and your account is in good standing, your order will be immediately processed and an order confirmation will be sent to you. An invoice will then be sent once the order is shipped. Endress+Hauser Canada Ltd Terms and Conditions of Sale apply.

Invoicing for new customers

You will be contacted by an Endress+Hauser representative to set up your account after you submit your order. This will include completing a credit application. Upon approved credit, an order confirmation will be sent to you once your account is established. An invoice will then be sent when the order is shipped. Please review Endress+Hauser Canada Ltd. Terms and Conditions of Sale for further details.

Consultation

Our technical experts are available during office hours to answer any questions you may have regarding our E-direct products and their application at 1-800-668-3199.

Warranty

Please refer to the Endress+Hauser Canada Ltd Terms and Conditions of Sale for further details.

Dispatch times

Placing your first order using a credit card will ensure prompt dispatch. If you opt to place your first order by purchase order number, the dispatch of your ordered items may be delayed whilst we organize your account and Proforma invoice.

PLEASE NOTE:

- The dispatch time displayed alongside each product is an indicator e.g. 48 hours or 5 working days (for three identical units) and will be confirmed in your order confirmation. This dispatch time applies for orders placed before 09.00 a.m.
- Our dispatch times may sometimes be longer than 48 hours or 5 working days. Should this happen you will be advised by the dispatch time indicator.



= 48 hours (Your order will be dispatched on the second working day after order placement)



= the indicated number of working days

Shipment by Air Express is available at an additional cost.

Everything you need

We have bundled all data you need to choose your entry-level **sensors and instruments** in this website: technical specifications, model codes, prices, ...

01 02 03 04 05 06

Welcome to E-direct!

The home of entry-level sensors and instruments that do not compromise on quality.

Sensors and instruments

			
from \$ 902 CAD	from \$ 246 CAD	from \$ 974 CAD	from \$ 154 CAD
Level switches & sensors >>>	Pressure switches & sensors >>>	Flowmeters & flow switches >>>	Temperature sensors & switches >>>



High Quality



E-direct products are 100% Endress+Hauser quality, with sophisticated, state-of-the-art technology.

Great Value



Attractive prices with tiered quantity discounts.

Easy to Select



The products are largely preconfigured. You can select the appropriate device quickly and easily and order it direct.



[Go to e-direct.endress.com](http://e-direct.endress.com)

Edirect Products Spotlight

Cerabar PMC131

Absolute and gauge pressure measurement

from \$239



- Cost-effective and compact pressure transducer for measurement in gases or liquids
- Dry capacitance ceramic sensor (Ceraphire)
- Overload-resistant high purity ceramic sensor (99.9% Al_2O_3)
- Best fit for vacuum applications and applications with abrasive media

Easytemp TMR31

Compact, fast and precise thermometer

from \$101



- Small, compact design made entirely of stainless steel
- Fulfills the requirements of modern process measurement technology with cost efficiency, optimal use of space, reliable operation, easy installation and commissioning
- Vibration-proof integrated thin-film sensors guarantee highest operational safety at the fastest response times

RN221N

Active barrier with optional HART® diagnosis

from \$253



- Wide range power supply, flexible power source
- Bidirectional HART® transmission. Communication sockets for HART® sensor setting up. Evaluation of status information from connected transmitter with HART® protocol
- Manual or automatic reset of the relay contact

RIA15

Loop-powered indicator for 4 to 20 mA or HART® signals

from \$205



- Display of 4 to 20 mA measured values or optionally up to four of a sensor's HART® process variables in all industries
- Use as primary or secondary HART® master
- Minimal installation depth
- No external power supply required
- Easy three-key operation for configuring the device



Shop now!
www.e-direct.endress.com

Cerabar PMP131

Absolute and gauge pressure measurement

from \$257



- Price-attractive compact pressure transmitter with piezoresistive sensor with metallic measuring diaphragm
- Overload-resistant sensor up to 400 bar
- Small flush-mounted process connections

Soliphant FTM20

Vibronic point level detection for solids

from \$520



- For applications with fine-grained or coarse-grained, non-fluidized bulk solids
- Operational safety, reliability and universal applicability through use of the tuning fork measuring principle
- Measurement is unaffected by conductivity, build-up, turbulence, flows or air bubbles
- Simple and fast commissioning, no calibration required
- No mechanically moved parts, free of maintenance

Liquiphant FTL33

Vibronic point level detection for liquids

from \$248



- Especially designed for food & beverage applications
- Used for overflow prevention or pump dry-run protection preferably in storage tanks, mixing vessels and pipes.
- Compact: smallest vibronic sensor in the market
- Safe: continuous self-monitoring and reliable switching independent of media properties
- Easy: no calibration or adjustment; plug & play

Minicap FTC260

Capacitance point level detection

from \$262



- Designed for light bulk solids, particularly suited to applications involving aggressive media and heavy build-up
- Cost-effective, simple mounting and commissioning without calibration
- Mechanical safety, cost-efficiency and long operating life due to no wearing parts
- High operational safety and reliability due to active build-up compensation



Update your Talkline subscription:

info@ca.endress.com

Issue 78

Contact

**Endress+Hauser
Canada Ltd**

1075 Sutton Drive
Burlington, ON L7L 5Z8

Tel: 905 681 9292
1 800 668 3199
Fax: 905 681 9444

**Endress+Hauser
Canada Ltée**

6800 Côte de Liesse
Suite 100
St-Laurent, QC H4T 2A7

Tél: 514 733 0254
Téléc.: 514 733 2924

**Endress+Hauser
Canada Ltd**

4th floor, 805 10 Avenue SW
Calgary, AB T2R 0B4

Tel: 403 777 2252
1 888 918 5049
Fax: 403 777 2253

**Endress+Hauser
Canada Ltd**

9045 22 Avenue SW
Edmonton, AB T6X 0J9

Tel: 780 486 3222
1 888 918 5049
Fax: 780 486 3466

Endress+Hauser 

People for Process Automation