

# FLOW & PRESSURE MONITORING

*videographic recorders & data loggers*

## CAPABILITIES

GENIVAR's flow and pressure monitoring system includes state-of-the-art equipment such as the world's first field-mountable videographic recorder (photo). These units can be installed even in the most hostile environments, such as in maintenance holes in winter. It allows GENIVAR to take recording out of the control room and it provides local access to operational data.

Any GENIVAR office can deploy this system (or components) to meet project needs. Technical support is available from GENIVAR's Environmental Hydraulics team.

This equipment has been used successfully to perform: 12 pump tests at 3 pump stations (PS), transient monitoring in a sewage PS and on 2 water transmission mains, diagnose pressures (and transients) for the City of Toronto's largest water distribution system, and to resolve a pressure dip nuisance.



### ▶ flow meters

■ <b>clamp-on</b>	<b>ChronoFLO</b>
accuracy	$\pm 1-2\%$ of reading, zero bias without calibration
range	bi-directional $> 25\text{m/s}$
fluid types	sonically conductive
pipe diameter	19 - 75mm
resolution	$< .02 \times 10^{-9}\text{s}$ peak to peak

■ <b>insertion</b>	<b>HydrINS</b>
accuracy	$\pm 2\text{mm/s}$ or $\pm 2\%$ flow whichever is greater
range	bi-directional $0.01\text{m/sec} - 5\text{m/s}$
fluid types	electrically conductive
pipe diameter	100 - 8000mm

■ <b>totalizer</b>	<b>AquaMaster</b>
memory	3 months
channels	records 8831 events
frequency	15 to 65,500 s intervals

### ▶ pressure loggers

■ <b>temporary</b>	<b>Radcom LoLog LL</b>
uses	monitors flow, pressure, or 4 - 20mA
memory	16k (16 hrs)
input options	digital & analog

■ <b>permanent</b>	<b>ABB Sensors</b> <i>(with SM500F or SMC 3000)</i>
261-UKNS	0.25 s, -15 to 300 psi
261-DKNS	0.25 s
261-UKSH	0.1 s
2600T	0.25 s (sewage)

■ <b>recording</b>	<b>ABB SMC 3000</b>
memory	1 GB (6 months)
channels	records $\geq 12$ signals
frequency	every 0.3 sec

■ <b>recording</b>	<b>ABB SM500F</b> <i>(2 units)</i>
memory	1 GB (2 months)
channels	records $\geq 4$ signals
frequency	every 0.1 sec

## KEY FUNCTIONS

### business needs

- long term monitoring
- commissioning

### services

- pumping tests
- suction piping, NPSH<sub>A</sub>
- transient control
- valve controls

### also available

- toolboxes
- plumbing parts
- ancillary equipment



**GENIVAR**

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