

# In-line Monitors for Peace of Mind ...

The new in-line monitors from Hanna are designed to give the users constant monitoring 24 hours a day, 7 days a week. The monitors can be used to measure the pH, EC, PPM levels in an "in-line" system, indicating any changes that are occurring before the changes show up as problems in the crop.

## WHY USE A MONITOR ?

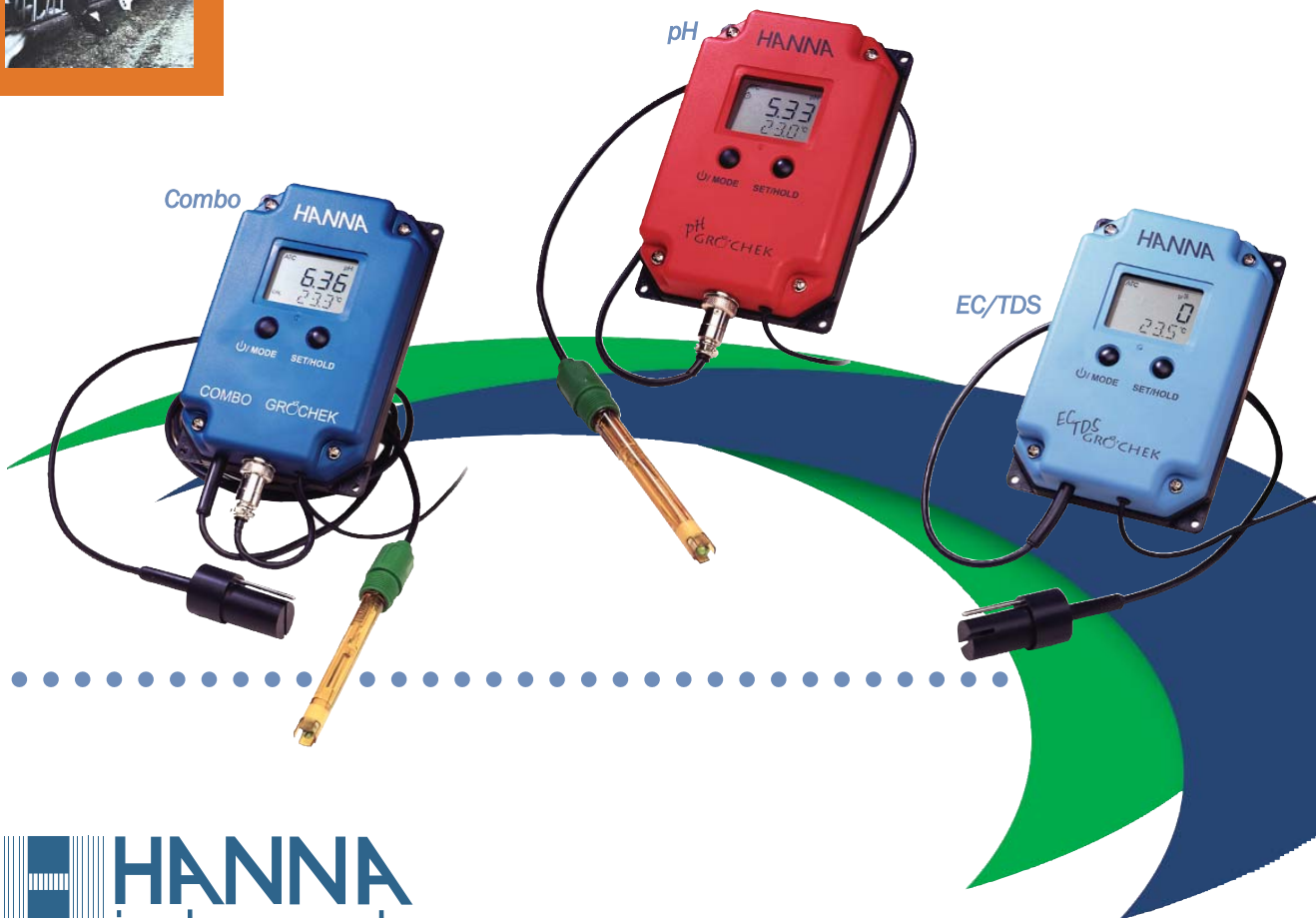
In any installation using a mechanical injector, there are 3 potential problems that can occur during irrigation :

- ✿ The quality of the incoming water can change ;
- ✿ The injector can start to wear, and change the injection rates ;
- ✿ The material injected could change in composition.

These problems could go unnoticed until there are visible problems with the crop. Using an "in-line" monitor for constant readings of the irrigation water, will show immediately the grower when things are changing, and give him a little "PEACE OF MIND".



P-L/grochekE



www.hannainstruments.com

**HANNA**  
instruments  
C A N A D A

Agriculture Division  
1-800-842-6629

Specifications		HI 993301	NEW	HI 993302
Ranges	EC	0 to 3999 $\mu$ S/cm		0.00 to 20.00 mS/cm
	TDS	0 to 2000 ppm		0.00 to 10.00 ppt
	Temperature	0.0 to 60.0°C or 32.0 to 140.0°F		0.0 to 60.0°C or 32.0 to 140.0°F
Resolution	EC	1 $\mu$ S/cm		0.01 mS/cm
	TDS	1 ppm		0.01 ppt
	Temperature	0.1 °C/°F		0.1 °C/°F
Accuracy (@20°C/68°F)	EC	±2% F.S.		±2% F.S.
	TDS	±2% F.S.		±2% F.S.
	Temperature	±0.5°C or ±1°F		±0.5°C or ±1°F
Typical EMC Deviation	EC	±2% F.S.		±2% F.S.
	TDS	±2% F.S.		±2% F.S.
	Temperature	±1°C/±2°F		±1°C/±2°F
EC/TDS Calibration		Automatic 1 point at 1413 $\mu$ S/cm		Automatic 1 point at 12.88 mS/cm
EC/TDS Probe		HI 7630 (included)		
EC/TDS Conversion Factor		Adjustable from 0.45 to 1.00		
Temperature Compensation		Automatic, with BETA ( $\beta$ ) = adjustable from 0.0 to 2.4% per °C		
Environment		From 0 to 50°C (32 to 122°F); RH 100%		
Power Supply		12 VDC adapter		
Dimensions		160 x 105 x 31 mm		
Weight		190 g		



Specifications		HI 991404	NEW	HI 991405
Ranges	EC	0 to 3999 $\mu$ S/cm		0.00 to 20.00 mS/cm
	TDS	0 to 2000 ppm		0.00 to 10.00 ppt
	pH	0.0 to 14.0		0.0 to 14.0
Resolution	EC	1 $\mu$ S/cm		0.01 mS/cm
	TDS	1 ppm		0.01 ppt
	pH	0.1		0.1
Accuracy (@20°C/68°F)	EC/TDS		±2% F.S.	
	pH		±0.1	
	Temperature		±0.5°C or ±1°F	
Typical EMC Deviation	EC/TDS		±2% F.S.	
	pH		±0.1	
	Temperature		±1°C or ±2°F	
Temperature Compensation		pH: automatic; EC/TDS: automatic with $\beta=0.0$ to 2.4%/°C		
Calibration	pH	1 or 2 points with 2 sets of memorized buffers		
EC/TDS Calibration	EC/TDS	Automatic at 1 point		
pH Electrode		HI 1293D (included)		
EC/TDS Electrode		HI 7630 (included)		
EC/TDS Conversion Factor		0.45 to 1.00 (CONV)		
Environment		0 to 50°C (32 to 122°F); RH 100%		
Power Supply		12 VDC (included)		
Dimensions		160 x 105 x 31 mm		
Weight		190 g		



Specifications		HI 991401	NEW
Range	pH	0.0 to 14.0	
	Temperature	0 to 60.0°C or 32.0 to 140.0°F	
Resolution	pH	0.1	
	Temperature	0.1°C or 0.1°F	
Accuracy (@20°C/68°F)	pH	±0.1	
	Temperature	±0.5°C or ±1°F	
Typical EMC Deviation	pH	±0.1	
	Temperature	±1°C or ±2°F	
pH Electrode		HI 1293D (included)	
pH Calibration		Automatic 1 or 2 points with 2 sets of memorized buffers, (pH 4.01/7.01/10.01 or pH 4.01/6.86/9.18)	
Temperature Compensation		Automatic, 0 to 50°C	
Power Supply		12 VDC (included)	
Environment		0 to 50°C (32 to 122°F); RH 100%	
Dimensions		160 x 105 x 31 mm	
Weight		190 g	

