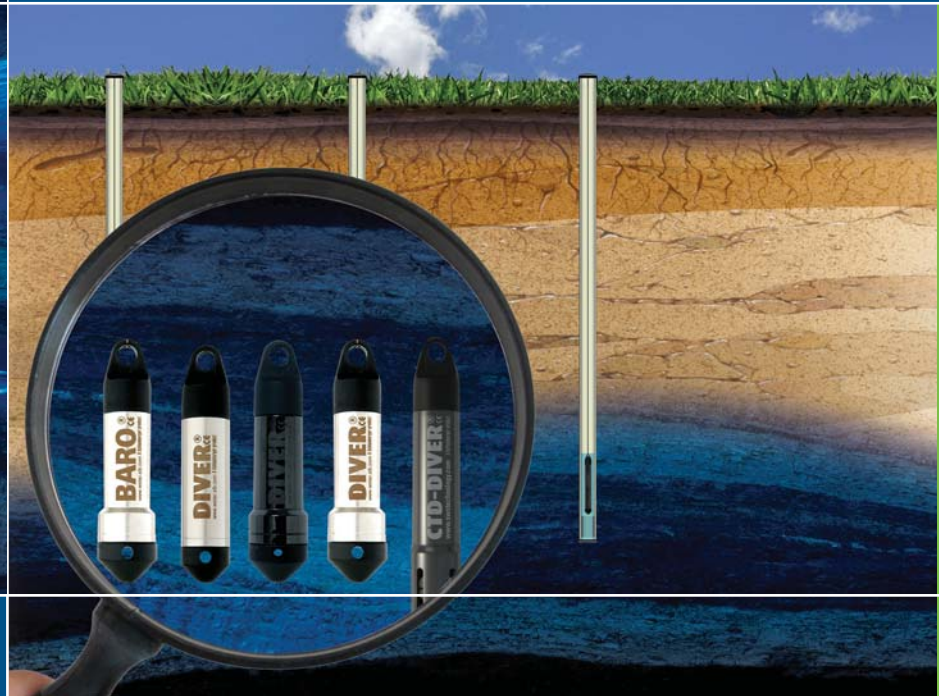
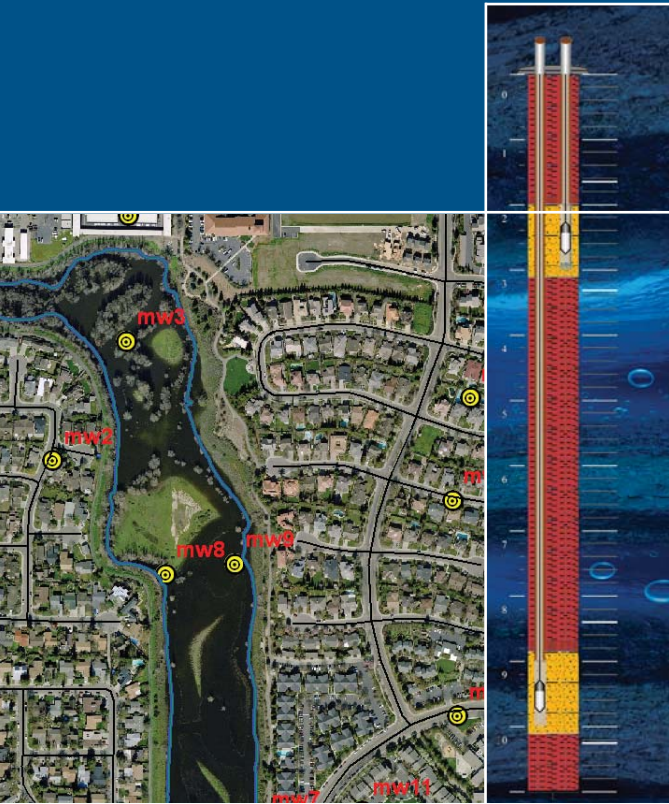


Diver-Suite



*Reliable, accurate groundwater
Diver dataloggers and software*

Diver-Suite

SMART MONITORING TECHNOLOGY

Diver-Suite*, from Schlumberger Water Services, provides groundwater and environmental professionals with state-of-the-art instrumentation technology for monitoring groundwater networks.

Available in several models, this robust line of Diver* dataloggers accurately measures and records fluctuations in groundwater levels, temperature and conductivity†.

SUITABLE FOR ANY ENVIRONMENT

From the technologically advanced Micro-Diver* to the corrosion resistant CTD-Diver*, Diver dataloggers are hermetically sealed to external effects, so moisture and/or electrical influences cannot affect measurement results. With an extended battery life, this translates to long-term uninterrupted service. All Divers are calibrated to operate from 0 °C to 50 °C.

WIDE RANGE OF APPLICATIONS

- Long-term water level monitoring
- Groundwater monitoring network automation
- Pumping and slug tests
- Watershed, drainage basin and recharge areas
- Stream gauging, lake levels and reservoirs
- Harbour and tidal fluctuation monitoring
- Wetlands and stormwater run-off monitoring
- Aquifer storage and recovery projects
- Saltwater intrusion projects
- Discharge monitoring
- Monitoring landfill sites
- Monitoring groundwater and surface water interactions

ACCURATE MEASUREMENTS

Divers monitor groundwater level and temperature with a typical accuracy of up to ±0.05% FS (Full Scale). In addition, the CTD-Diver is equipped with a four-electrode sensor for accurately recording conductivity.

From the Field to the Office



Field Advantage

Achieve precise measurements of groundwater levels, temperature, and conductivity in the field. Diver-Suite is part of a full range of products designed to streamline your monitoring workflow.



Office Integration

Program multiple Diver dataloggers, download measurements onto your PC, and export data to a spreadsheet or modeling program - Diver-VisiONE* is a flexible "project-based" data management application designed for exchanging critical Diver information.

Mini-Diver

A proven concept

The Mini-Diver* is based on an ingenious and proven concept and is acknowledged as the most reliable instrument for the autonomous measuring and recording of groundwater level and temperature. Its internal memory of 24000 measurements per parameter provides sufficient capacity to perform nearly one measurement every ten minutes for six months. For each measurement, the Diver registers the date and time, groundwater level, and temperature.



Highlights:

- hermetically sealed in stainless steel housing
- fixed measurements
- suitable for small diameter wells

General Specifications

Dimensions	ø18-22 mm × 90 mm
Memory	24000 measurements
Wetted parts	
housing	stainless steel (316L)
o-rings	fluorocarbon rubber (FKM)
pressure sensor	ceramic (Al ₂ O ₃)
cap / nose cone	Akulon (PAG 30%)
Battery life	Dependant on usage
Sample interval	0.5 second to 99 hours
Mass	70 grams

Temperature specifications

range / compensated	-20 °C to 80 °C / 0 °C to 50 °C
accuracy*	±0.1 °C
resolution	0.01 °C

Pressure specifications

Type	DI 501	DI 502	DI 505	DI 510
Range	10 mH ₂ O	20 mH ₂ O	50 mH ₂ O	100 mH ₂ O
- accuracy*	±0.5 cmH ₂ O	±1.0 cmH ₂ O	±2.5 cmH ₂ O	±5.0 cmH ₂ O
- resolution	0.2 cmH ₂ O	0.4 cmH ₂ O	1.0 cmH ₂ O	2.0 cmH ₂ O

* typical accuracy

†Only available with CTD-Diver.

Micro-Diver

Small in size, great in performance

Measuring only 88 mm in length and 18 mm in diameter, the Micro-Diver is the smallest Diver capable of accurately recording groundwater levels and temperature. Micro-Diver is specifically designed for monitoring wells too small to accommodate larger data loggers. In addition to its compact size, the Micro-Diver's memory capacity can store up to 48000 measurements per parameter - almost one measurement every ten minutes for an entire year.



Highlights:

- hermetically sealed in stainless steel housing
- various measurement methods: fixed, event dependent, averaging, and pumping test
- suitable for 19 mm monitoring wells

General Specifications

Dimensions	ø18 mm × 88 mm
Memory	48000 measurements
Wetted parts	
housing	stainless steel (316L)
o-rings	fluorocarbon rubber (FKM)
pressure sensor	ceramic (Al ₂ O ₃)
cap / nose cone	Akulon (PAG 30%)
Battery life	Dependant on usage
Sample interval	0.5 second to 99 hours
Mass	60 grams

Temperature specifications

range / compensated	-20 °C to 80 °C / 0 °C to 50 °C
accuracy*	±0.1 °C
resolution	0.01 °C

Pressure specifications

Type	DI 601	DI 602	DI 605	DI 610
Range	10 mH ₂ O	20 mH ₂ O	50 mH ₂ O	100 mH ₂ O
- accuracy*	±1.0 cmH ₂ O	±2.0 cmH ₂ O	±5.0 cmH ₂ O	±10.0 cmH ₂ O
- resolution	0.2 cmH ₂ O	0.4 cmH ₂ O	1.0 cmH ₂ O	2.0 cmH ₂ O

* typical accuracy

Cera-Diver

At home in any environment

Monitoring groundwater under potentially corrosive conditions, such as brackish water and seawater, requires a robust and durable datalogger. The ceramic-shelled Cera-Diver* is designed specifically for such environments. This highly reliable and compact Diver measures groundwater levels with a typical accuracy of ±0.05% (FS). The Cera-Diver is equipped with a memory for 48000 measurements per parameter.



Highlights:

- hermetically sealed in ceramic housing
- various measurement methods: fixed, event dependent, averaging, and pumping test
- robust corrosion resistant housing

General Specifications

Dimensions	ø18-22 mm × 90 mm
Memory	48000 measurements
Wetted parts	
housing	ceramic (ZrO ₂)
o-rings	fluorocarbon rubber (FKM)
pressure sensor	ceramic (Al ₂ O ₃)
cap / nose cone	Akulon (PAG 30%)
Battery life	Dependant on usage
Sample interval	0.5 second to 99 hours
Mass	55 grams

Temperature specifications

range / compensated	-20 °C to 80 °C / 0 °C to 50 °C
accuracy*	±0.1 °C
resolution	0.01 °C

Pressure specifications

Type	DI 701	DI 702	DI 705	DI 710
Range	10 mH ₂ O	20 mH ₂ O	50 mH ₂ O	100 mH ₂ O
- accuracy*	±0.5 cmH ₂ O	±1.0 cmH ₂ O	±2.5 cmH ₂ O	±5.0 cmH ₂ O
- resolution	0.2 cmH ₂ O	0.4 cmH ₂ O	1.0 cmH ₂ O	2.0 cmH ₂ O

* typical accuracy

CTD-Diver

Reliable in all conditions

Where there is a need to monitor not only groundwater levels but also saltwater intrusion, injected wastewater, or contamination from chemical discharges and landfill sites, the ceramic-casing on the CTD-Diver is the instrument of choice. In addition to the pressure and temperature sensor, the CTD-Diver has a four-electrode conductivity sensor for reading conductivity across an expanded measurement range (0-120 mS/cm). There are two options for measuring conductivity: displaying measured conductivity or specific conductivity at 25 °C.

The CTD-Diver accurately records up to 48000 measurements of groundwater levels, temperature, and conductivity with corresponding date and time.



Highlights:

- Hermetically sealed in ceramic housing
- Various measurement methods: fixed, event-dependent, averaging, and pumping test
- Robust corrosion resistant sensor and housing

General Specifications

Dimensions	ø18-22 mm × 135 mm
Memory	48000 measurements
Wetted parts	
housing	ceramic (ZrO ₂)
conductivity sensor housing	ceramic (ZrO ₂)
conductivity sensor	platinum electrodes on ceramic (Al ₂ O ₃) carrier
o-rings	fluorocarbon rubber (FKM)
pressure sensor	ceramic (Al ₂ O ₃)
cap / nose cone	Akulon (PAG 30%)
Battery life	Dependant on usage
Sample interval	1 second to 99 hours
Mass	95 grams

Temperature specifications

range / compensated	-20 °C to 80 °C / 0 °C to 50 °C
accuracy*	±0.1 °C
resolution	0.01 °C

Conductivity specifications

user adjustable range	10 µS/cm to 120 mS/cm
accuracy*	± 1 % of reading
resolution	± 0.1 % of reading

Pressure specifications

Type	DI 271	DI 272	DI 273
Range	10 mH ₂ O	50 mH ₂ O	100 mH ₂ O
- accuracy*	±0.5 cmH ₂ O	±2.5 cmH ₂ O	±5.0 cmH ₂ O
- resolution	0.2 cmH ₂ O	1.0 cmH ₂ O	2.0 cmH ₂ O

* typical accuracy

Baro-Diver

Compensate barometric pressure

The Baro-Diver* ensures that you accurately capture changes in atmospheric pressure. Conveniently priced and easy to adjust, one Baro-Diver covers a radius of up to 15 km, depending on the topography.

Based on proven, innovative technology, the Baro-Diver has an internal memory capable of storing 24000 measurements per parameter.

For each measurement, the Baro-Diver simultaneously registers barometric pressure, air temperature, date and time.



Highlights:

- measures atmospheric pressure for accurate barometric compensation of Divers
- hermetically sealed in stainless steel housing

General Specifications

Dimensions	ø18-22 mm × 90 mm
Memory	24000 measurements
Wetted parts	
housing	stainless steel (316L)
o-rings	fluorocarbon rubber (FKM)
pressure sensor	ceramic (Al ₂ O ₃)
cap / nose cone	Akulon (PAG 30%)
Battery life	Dependant on usage
Sample interval	0.5 second to 99 hours
Mass	70 grams

Temperature specifications

range / compensated	-20 °C to 80 °C / -10 °C to 50 °C
accuracy*	±0.1 °C
resolution	0.01 °C

Pressure specifications

Type	DI 500
Range	1.5 mH ₂ O
- accuracy*	±0.5 cmH ₂ O
- resolution	0.2 cmH ₂ O

* typical accuracy

Diver data management software

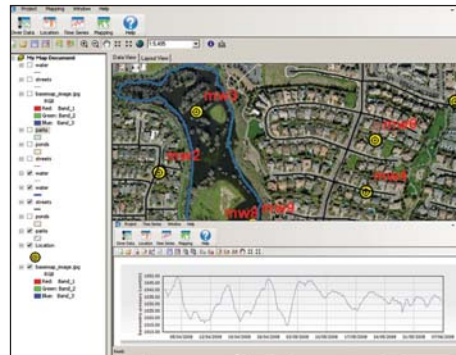
User-friendly applications for your Desktop or Handheld PC

Diver-Vision[®]

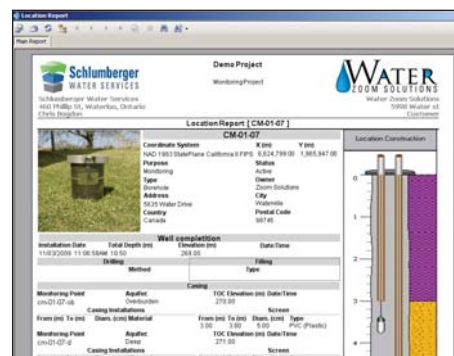
The Diver-Vision[®] software provides users with a full range of graphical tools for management of well location details, displaying borehole lithology and well construction, plotting time-varying Diver data (groundwater water elevation, temperature, conductivity), and mapping capabilities in a seamlessly integrated groundwater software package.

- **Monitoring Well Data Management** - Create, modify, and display X, Y, Z location data, borehole lithology, well construction design, and time-series.
- **Mapping** - View and label your monitoring well data over a map and display attribute data at each point using the power of the built in ESRI ArcGIS[®] Engine[†]
- **Expanded Data Options** - Capture a full range of environmental variables affecting groundwater recharge including precipitation, evaporation, discharge, and manual measurements.
- **QA/QC and Statistics** - Identify data anomalies, understand spatial and temporal trends, and gain confidence in the data assessments.
- **Reporting Automation** - Quickly create customized reports that incorporate logo and company details, site photos, well completion and lithology profiles, monitoring data, sampling dates, and other information.
- **Data Flexibility** - Export location profiles to an image, import/export time-series to MS Excel[™] and import from MS Access[™], export maps to Google[®] Earth[™] or as ESRI Shapefile[†] format.

MS Excel and MS Access are trademarks of Microsoft Corp



Map monitoring wells and plot time-series



Report on well construction and lithology

Diver-Pocket Reader

Built for your Handheld PC or PDA, the Diver-Pocket Reader[®] software reads data stored in Diver dataloggers, displays time-series plots, and exports data to various formats. Download a complimentary version from our website www.swstechnology.com

Diver-Pocket Manager

The Diver-Pocket Manager[®] software extends the features of Diver-Pocket Reader, with the added capability to program Divers, including the measurement method, frequency, and the start date/time.

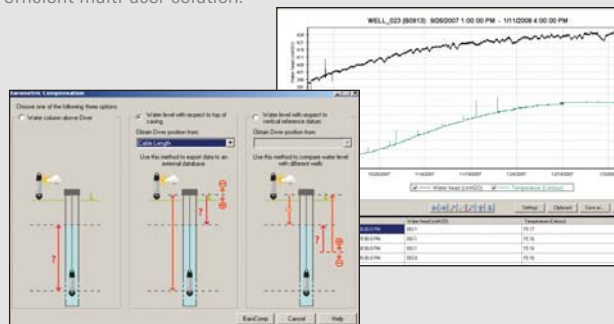


Diver-Office

Use the Diver-Office[®] desktop application to calibrate, read, and program all Divers in the Diver-Suite. Download measurements onto your PC, view time series data in a plot or tabular form, and export data to a spreadsheet or groundwater modeling program. Download a complimentary version from our website www.swstechnology.com

Diver-Office Network

Diver-Office Network[®] extends the features of Diver-Office, with the added capability to share your database over a network, providing an efficient multi-user solution.





About Schlumberger Water Services

Managing the world's water resources is no small task. We tackle global water challenges with our worldwide network of hydrologists, geologists, and environmental experts. Combined with powerful and cost-effective technologies, we are successfully managing the world's water resources, for now and the future.

Our people and technology drive your success.

