

User Calibration is automatic on one or four points, depending on the measuring variable. Stabilized power supply and advanced electronics guarantees optimal performances over time.

The HD25.2 is a **datalogger** that stores up to 999 samples.

The data can be transferred from the instrument connected to a PC via the RS232C and USB 2.0 serial ports.

The RS232C serial port can be used to transfer the acquired measurements to a 24 column printer (i.e. HD40.1)

The Print function allows to print labels with progressive and automatically incrementing numeration, with all data related to the sample being examined. The dedicated software **DeltaLog11** allows instrument management and data processing on PC.

The use of the HD25.2 by more users is facilitated by the "User Management" function, which allows, according to the case, to enable or disable some advanced functions of the instrument through password.

**The protection degree is IP66.**

## Technical characteristics

### Instrument

|                                      |                            |
|--------------------------------------|----------------------------|
| Dimensions (Length x Width x Height) | 220x120x55mm               |
| Weight                               | 400g (batteries included)  |
| Materials                            | ABS, rubber                |
| Display LCD                          | 4½ characters plus symbols |
|                                      | Visible area: 52x42mm      |

### Operating conditions

|                                  |  |
|----------------------------------|--|
| Instrument working temperature   | 0 ... 50°C   |
| Storage temperature instrument   | -25 ... 65°C   |
| Working relative humidity        | 0 ... 90% R.H. without condensation                          |
| Storing of Calibration standards | 5...25°C (temperature should not exceed, protect from light) |

### Protection degree

**IP66**

### Power supply

|           |   |
|-----------|---|
| Batteries | 3 1,5 V AA type batteries                         |
| Autonomy  | 100 hours with 1800mAh alkaline                   |
| Mains     | Mains adapter (cod. SWD10)<br>100-240Vac/12Vdc-1A |

### Measuring methods

|              |  |
|--------------|--|
| Standard     | EPA180.1, ISO-NEPH (ISO 7027), EBC, ASBC, WHITE %T e IR %T |
| Light source | LED IR (850nm) and white LED (470nm)                       |
| Receiver     | Silicium photodiode  |
| Sample cell  | Ø24mm - height 68mm, 20cc                                  |



## HD 25.2 BENCH-TOP TURBIDITY METER

The **HD25.2** is a digital turbidity meter for laboratory and mobile use, suitable for measurements in drinking water, waste water and process liquids. The working principle is based on the nephelometric (90° scattered light sensor) method.

It is equipped with three light detectors and two LED light sources (white and infrared) which are permanently kept under control in order to guarantee long-term stability. The instrument performs measurements according to the standards **EPA 180.1, ISO-NEPH (ISO 7027), EBC and ASBC**. It is also able to carry out measures of transmission factor percentage of white and infrared light.

The initial factory calibration is based on Formazin primary standard. For routine calibration a set of stabilized secondary standard solutions is available: **STCAL** (Turbidity standards for calibration):

- **STCAL 1** less than 0,05 NTU
- **STCAL 2** equal to 8 NTU
- **STCAL 3** equal to 80 NTU
- **STCAL 4** equal to 800 NTU



## Measurement of turbidity

### Method / Measuring range

|          |                   |
|----------|-------------------|
| EPA180.1 | (0...1000 NTU)    |
| ISO-NEPH | (0...1000 FNU)    |
| EBC      | (0...250 EBC)     |
| ASBC     | (0...9999 ASBC)   |
| WHITE %T | (0...100 %T)      |
| IR %T    | (0...100 %T)      |
| 0.01 NTU | (0...9.99 NTU)    |
| 0.1 NTU  | (10.0...99.9 NTU) |
| 1 NTU    | (100...1000 NTU)  |

### Resolution

### Accuracy

### Repeatability

|   |
|---|
| ±2% reading + 0.01 NTU (0...500 NTU)    |
| ±3% reading (500...1000 NTU)            |
| ±2% reading or 0.01 NTU (the major one) |

### Security of memorized data

Unlimited

### Time

### Date and hour

### Accuracy

real time schedule  
1min/month max error

### Measured values storing

### Quantity

999 samples

### Serial interface RS232C

### Type

### Baud rate

### Data bit

### Parity

### Stop bit

### Flow Control

### Serial cable length

RS232C electrically isolated  
Can be set from 1200 to 38400 baud  
8  
None  
1  
Xon/Xoff  
Max 15m

### USB interface

### Type

1.1 - 2.0 electrically isolated

### Connections

### Serial interface

### USB interface

### Mains adapter

DB9 connector (9- pole male)  
USB connector type B  
2- pole connector (Ø5.5mm-2.1mm). Positive at centre.

## Ordering codes

**HD 25.2:** The kit is composed of: instrument HD25.2, 4 empty cells, 4 calibration standards STCAL, 3 1.5Vdc alkaline batteries, lubricant rag, 25cc Silicon oil, instructions manual, carrying case and software DeltaLog11 for PCs running Windows operating systems.

## Accessories

**9CPRS232:** Connection cable SubD female 9- pole for serial output RS232C

**CP22:** Connection cable USB 2.0 connector type A - type B

**SWD10:** Stabilized power supply at 230Vac/9Vdc-300mA mains voltage.

**HD40.1:** 24-column portable thermal printer, serial interface, 57mm paper width, four NiMH 1.2V rechargeable batteries, SWD10 power supply, instruction manual, 5 thermal paper rolls. Requires the cable 9CPRS232 (optional).

**PL:** Lubricant rag

**OS1:** Silicon oil - 25cc.

**KCV:** 4 empty sample cells Ø24x68mm

## Turbidity calibration standards

**STCAL 1:** Calibration standard with low turbidity Formazin reference less than 0,05 NTU.

**STCAL 2:** Calibration standard with Formazin reference 8 NTU - 20cc.

**STCAL 3:** Calibration standard with Formazin reference 80 NTU - 20cc.

**STCAL 4:** Calibration standard with Formazin reference 800 NTU - 20cc.

**KS:** Kit 4 calibration standard with Formazin reference STCAL 1, STCAL 2, STCAL 3, STCAL 4.



HD40.1



ASBC



FNU



EBC



NTU