

EXPLOMET^{2T+}



Technical Sheet

HIGHLIGHTS

The Explomet^{2T+} is simply the best measuring instrument manufactured by Kontinitro since 1987. The Explomet 2T + is the first VOD measuring instrument with a self-calibrating quartz independently of the outside conditions. Designed to withstand temperatures between -40 and 80 degrees Celsius (-40 and 176 degrees Fahrenheit), it can withstand the worst conditions, such as rain, mud, sand, dust, and snow. Its ionized aluminum case gives it great strength and makes this measuring instrument almost indestructible.

Technical & Logistic Offices

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VAT 194.050.230

DESCRIPTION

The Explomet 2T+ is an electronic time counter which can measure the velocity of detonation of any explosive or propellant up to 15'000 [m/s]. This measuring instrument is triggered by the light emitted during the explosion and transmitted by means of plastic optic fiber placed into the explosive.

Application areas:

- civil engineering
- military engineering
- aerospace engineering
- physics
- chemistry

OPERATION

The Explomet 2T+™ is a compact and user-friendly instrument. You can carry out V.O.D tests quickly and to very high precision. It meets the European standards with its start-stop measurement method.

The EXPLOMET 2T+ meets European standards for measuring the velocity of detonation:

« EN 13631-14:2003 - Explosives for civil uses - High explosives - Part 14: Determination of velocity of detonation »

“Effective Date: 24-Mar-2020

Measuring equipment for the “start-stop-method”.”

MEASURING METHOD AND PRINCIPLE

The Explomet 2T+™ has 5 independent timers measuring the time intervals between the illumination of 6 fiber optic cables.

It is not necessary to respect an order to connect the optical fibers either on the explosive or the Explomet 2T+.

The instrument can record from 1 to 5 V.O.D measurements at a time depending on the number of optical fibers used from 2 to 6.

The Explomet 2T+ operates in one of the following modes:

1: Velocity and Time: the first optic fiber to be illuminated gives the starting signal: start and the last fiber to be illuminated gives the stop signal: stop. The Explomet 2T+ measures the time intervals in microseconds between the illumination of two consecutive optic fibers and calculates the Velocity of Detonation (V.O.D) in meter per second [m/s].

2: Time Only: The optic fibers are illuminated randomly. The Explomet 2T+ measures the time intervals (in microseconds) between the illumination of the first and the second fiber, then between the second and the third fiber, and so on until a maximum of 6 optical fibers.

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SPECIFICATIONS

Dimension:

- Explomet 2T+ full case in anodized aluminum
130 x 185 x 43-83 [mm]
- Peli Transport Case
Outside Diameter: 360 x 460 x 160 [mm]

Weight:

- Explomet 2T+: 1.85 [kg],
- Explomet 2T+ with case and material: 5.7 [kg]

Autonomy:

- 11h hours on rechargeable Lithium-Ion batteries 18650
- AC/DC adapter/charger 65 W. Input: 100-240V ~50-60Hz - 1.5A. Output: 19V 3.42A.
- Average batteries charging time: 1h45min

Operating range:

- Distance between two optical fibers on the explosive: from 50 [mm] to 9999 [mm]
- Detonating velocity up to 15'000 [m/s]
- Time interval measurement: 10 nanoseconds to 10.7 seconds

Timers:

- 5 synchronous timers

Operating temperature:

- -40 to 80°C

Accuracy:

- +/- 10 nanoseconds [ns]

Fiber Optic:

- ESKA™ SK-40 Simplex, Duplex & 6 Channels Plastic Optical Fiber Cable
Core Ø: 1mm, Outer Ø: 2.2mm

File Type:

- Text file (.txt) can be read with all programs reading txt files (Word, Excel, Notepad, Open Office, Text Edit, Pages, Numbers, etc.).

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