1m³ SPHERE APPARATUS

FOR DETERMINATION OF EXPLOSION CHARACTERISTICS
OF DUST CLOUDS P_{max} ◦ $(dp/dt)_{max}$ ◦ K_{st} ◦ LEL ◦ LOC

Model: DPD-2

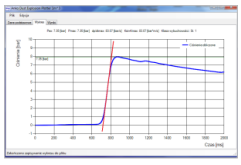
ver. 2.2, 2016

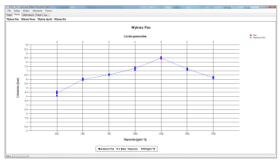
STANDARD REFERENCES:

- EN 14034-1 + 2 + 3 + 4 :
  - Determination of the maximum explosion pressure Pmax of dust clouds
  - Determination of the maximum rate of explosion pressure rise (dp/dt)max of dust clouds
  - Determination of the lower explosion limit LEL of dust clouds
  - Determination of the limiting oxygen concentration LOC of dust clouds
- VDI 2263, PART 1. Point 2.2, 2.3, 2.4
- EN ISO/IEC 80079-20-2 Explosive atmospheres. Material characteristics. Combustible dust methods.
- ISO 6184/1 - Explosion protection systems. Part 1: Determination of explosion indices of combustible dust in air.

SPECIFICATION:

Double layer sphere vessel	1000-liter
Material:	stainless steel only no carbon steel applied
Pneumatic opening	bayonet lock
Working pressure	$P_{max} \geq 30$ bar
ANKO software	Dust Explosion Plotter®
Software functionality	enhanced procedure noise reduction test report & printing
Measurement range: P_{max} $(dp/dt)_{max}$ = Kst LEL, UEL LOC	 0-25 bar > 1000 from 0 g/m³ 1-21 %
Fast dust injection valve	Opening time ≤ 30 ms
Cooling water inlet	flange with ½" nozzle
Dispersion nozzles	2x C shape & 2x rebound
Dispersion block	2x vessel + injection valve
Safety features	pressure release valve safety design locks software safety control independent safety block
Vessel air temperature	front panel display
LOC module + hybrid mixtures	optional, built-in
Recommended space	minimum 3,5 x 5 m
Power supply	110 or 230 VAC, 2000W
Weight	1700 kg





UNIQUE FEATURES :

- Double layer design – for fast cooling. Necessary to achieve high test efficiency.
- Ignitor connector – easy removable, gold plated
- Built-in type K shielded thermocouple
- View glass port
- Fast DAQ system, rate: 10-100kHz
- User control panel
- Hybrid mixtures and LOC system
- Vacuum system – pump & control

ANKO · Tuzycka 10 · 03-683 Warsaw · Poland
www.anko-lab.com · office@anko-lab.com · tel. : + 48 22 619 29 88