DDS CALORIMETERS

Scientific Analytical Calorimeter Solutions

COMPANY PROFILE

About Us, Our Vision and Mission

DDS Calorimeter Systems are the most advanced automatic Bomb Calorimeter Systems available today.
Digital Data Systems are the proud designers and manufacturers of the CAL2K and CAL3K Bomb Calorimeter Systems. DDS was established in 1972 by Klaus Ludwig. The original aim of establishing the company was to solve industrial and scientific problems using digital techniques.

Originally, DDS specialized in sophisticated, data capturing equipment and scientific instruments.

In designing, manufacturing and supplying products, DDS's company policy is to provide the customer with what he/she wants and for the best possible price. To achieve its policies, the company ensures that only trained and experienced staff are employed.

The scientific department has teamed up with certain distributors who concentrate in the mining sector and other sectors who utilize scientific equipment in laboratories such as the CAL3K Next Generation Bomb Calorimeter.

DDS products are exported worldwide and enjoys long-term relationships with our dealers and we strive to provide the best products and service in a professional manner.

DDS owns its own building, which is made up of a factory and offices. The factory includes a store room, production section and test room.

The main office is situated in the hub of an industrial area within Randburg. Close to the major highways and a mere 35 kilometers from Johannesburg's CBD.

DDS is represented in South Africa as well as surrounding African countries, Europe, the Fast East, Middle East, South and North America and Australia.

Contact us for more information on any of the DDS products.

COMPANY HISTORY

1972

The first unit - AMPC (Automatic Microprocessor Calorimeter) was produced.

It was a dual water isothermal unit controlled by a microprocessor.

1980

A new revolutionary design of calorimeter, namely the dry static jacket calorimeter the CP500 was produced. The determination time on this system was significantly reduced, increasing the unit efficiency by 4 times.

Early 2002

The CAL2K was launched, the tried and tested dry system was retained and only the very latest technology was used, including surface mount devices.

2005

DDS released the ECO calorimeter model under the CAL2K brand.

COMPANY HISTORY

2007

DDS released the E2K calorimeter model under the CAL2K brand.

2014

DDS launched the new CAL3K bomb calorimeter range still with the dry static jacket method (aneroid (waterless) system), the CAL3K-A was the first to be released

2017

The very first fully automatic model, the CAL3K-AP was introduced.

2018

The CAL3K-F calorimeter model was introduced

COMPANY HISTORY

2019

DDS released the CAL3K-S calorimeter model.

2021

DDS launched the CAL3K-ST calorimeter model.

FUTURE PROSPECTS

DDS is continuously working towards newer, more efficient and faster calorimeter models. Future models shall be announced.

MEET OUR TEAM

1

Klaus Ludwig

Founder / Software

2

Rolf Ludwig

Director / CEO

3

Desiree Ashton

Head of Sales / Sales Manager

4

Pauline Holmes

Accounts and Purchasing Manager

5

Jess Louw

Marketing Manager, Web Designer & Developer

6

Michael Lessle

Production Manager

7

Leah Makgaka

Production Team

8

Thandeka Nyembe

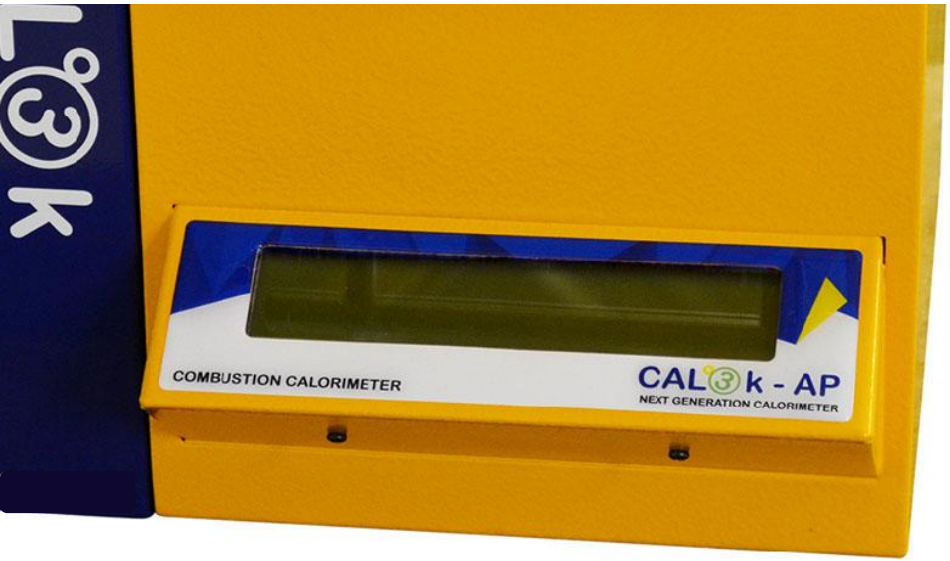
Production Team

8

Lorraine Lequoa

Production Team

Applications for Various Industries



DDS Bomb Calorimeter uses span across a wide range of applications: animal feed research, coal analysis, explosives analysis, fuel analysis, food & nutrition, oil analysis, universities, waste product analysis, cement manufacturing, just to name a few. There are various other applications continuously being added.

Our CAL3K Calorimeter Systems

01

CAL3K-A Calorimeter Model

The CAL3K-A is our fastest calorimeter systems and is ideal for high sample throughput with more than 10 samples per hour. It uses a combination of the Isothermal and Adiabatic calorimetry methods and is still waterless. The minimum determination time is as little as 4-5 minutes per sample. The CAL3K-A makes use of the external oxygen filling station, 4K-4 thread type bomb vessel and air cooler with the calorimeter.

02

CAL3K-AP Calorimeter Model

The CAL3K-AP Calorimeter uses a combination of the Isothermal and Adiabatic methods, while still using the dry method, i.e. it is waterless. The minimum determination time is up to 5-7 minutes. There is no need for an external oxygen filling station as the vessel is automatically filled with oxygen inside the bomb calorimeter and the pressure is monitored. The minimum CAL3K-AP system comes complete with the calorimeter, two 4K-4 thread type bomb vessels and one air cooler. It can be expanded to 3 vessels and 2 coolers should your application requires it.

Our CAL3K Calorimeter Systems

03

CAL3K-F Calorimeter Model

The basic-level system containing the calorimeter, one bomb vessel, one air cooler and oxygen filling station, can complete up to 4 samples per hour. The basic system can be grown to 2 vessels as your budget grows. This expanded system can complete up to 6 samples per hour. As your CAL3K_F systems grows it uses the external oxygen filling station (3K-3) and the cooler (3K-2). The waterless cooler is a powerful air cooler with the ability to rapidly cool the bomb vessel, yet remain environmentally friendly. The sample repeat speed ranges between 7-8 minutes per sample for an expanded system configuration.

04

CAL3K-S Calorimeter Model

The CAL3K-S is an extremely accurate calorimeter systems and is ideal suited for budget applications, capable of 2.5 samples per hour. It uses an Isothermal calorimetry methods and is still waterless and environmentally friendly. The minimum determination time for the first sample is as little as 6 minutes, thereafter the bomb vessel needs to cooled, requiring time. The CAL3K-S makes use of the external oxygen filling station and a threaded bomb vessel. The cooler is incorporated into the CAL3K-S calorimeter making for a compact size.

Our CAL3K Calorimeter Systems

05

CAL3K-ST Calorimeter Model

The CAL3K-ST dry bomb calorimeter system finds applications in various fields where the measurement of calorific value or energy content of substances is essential. The CAL3K-ST is a low cost two bomb calorimeter system, capable of 3 samples per hour. It uses an Isothermal calorimetry methods and is still waterless and environmentally friendly. The minimum determination time for the first sample is as little as 6 minutes, thereafter the bomb vessel needs to cooled, requiring time. The CAL3K-ST makes use of the external oxygen filling station and threaded bomb vessel. The cooler is incorporated into the CAL3K-ST calorimeter making for a compact size.

International Standards

DDS complies with the following worldwide international standards

- GB/T 213-2008 – Determination of Calorific Value of Coal (Refer to ISO 1928:1995 International Standards) Chinese Version
- ASTM D1989-97
- ASTM E711-87 (Re-approved 2004)
- ASTM D240-02
- ASTM D5865-12
- ASTM E144-94
- ASTM D240-09
- ASTM D4809-00
- ISO 1928-2009
- ASTM D4809-13
- ISO 1928:1995
- BS 4791:1985
- DIN 51900-2
- prCEN/TS 15400 (EUROPEAN COMMITTEE FOR STANDARDIZATION) – Solid recovered fuels – Methods for the determination of calorific value
- ISO 18125-2017 International European Standard - Calorific Value Determination of Solid BioFuels
- ASTM D 5468-95 Standard Test Method for Gross Calorific and Ash Value of Waste Materials
- IS 1350-2 Methods of Test for Coal and Coke, Part II: Determination of Calorific Value (PCD 7: Solid Mineral Fuels) International Indian Standard
- EN 15400: 2011 Solid Recovered Fuels - Determination of Calorific Value
- ISO 9831:1998 Animal feeding stuffs, animal products and faceless or urine - Determination of gross calorific value - Bomb calorimeter method
- Ingress Protection (IP) according to Standard EN 60529/DIN 40050 – All DDS calorimeters comply with IP20.

TESTIMONIALS

SAS Technology and Environment Laboratory

“SAS Technology and Environment Laboratory are using their DDS Calorimeter for the analysis of hazardous waste with final disposal in incineration ovens. The determination of the Calorific Value of this type of waste is analyzed to determine the residual energy value in order to create the high calorie energy balance required for the incineration furnaces.”

TESTIMONIALS

Thomas Dobbie, Impact Solutions (UK)

“Easy to order spare parts: Ordered spare parts, parts shipped in a timely manner, customer service was good.”

Somnath Ghosal, Aimil Ltd.

“Thank you team DDS for wonderful and continuous support. This CAL3K-AP installation and performance would give a new enhanced confidence for discussion with all prospects now and in future”

TESTIMONIALS

Joyce Nkosi, Khwezela Colliery, Thungela

"I, Joyce Nkosi, Laboratory Supervisor at Khwezela Colliery, am using the CAL3K-A calorimeter system. I am very satisfied with the machine, the spares are available and proper service is done on the machine. The machine runs smoothly and I would recommend the machine for coal samples"

Pankaj Nanda, Handyman's Lime Limited

"We, Handyman's Lime Limited in Ndola, Zambia have been using the CAL3K-A system since March 2015. We use the CAL3K-A system for analysis of calorific value (CV in coal samples). We run on an average 180 samples per month. We have found the system to be reliable and well suited to our requirements. The system is cost effective and easy to maintain. We are extremely satisfied with the system as a whole, we even purchased a second oxygen bomb calorimeter system from Digital Data Systems in 2020."

CONTACT US

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