



# **AMS HADEN**

INSTRUMENT AND MINING SERVICES PTY LTD

PROPR HADEN INSTRUMENT SERVICES PTY LTD

**Occupational  
Hygiene**



**Safety**



**Environmental  
Monitoring**



**Hvac**



**Mine  
Ventilation**



**Smart Risk  
Management**



INNOVATING TOWARDS

# **Zero**harm

[www.amshaden.co.za](http://www.amshaden.co.za)



## **ABOUT US:**

**R. Haden Instrument Services has been operating since 1973, specialising in the import and distribution of instrumentation for environmental monitoring and control, mine ventilation, occupational hygiene, and process control.**

The product range includes instruments for monitoring airflow, temperature, humidity, pressure, noise levels, gas, illumination, dust, water quality, vibration, and climate. The company also manufactures its own line of instruments and provides in-house calibration services for airflow, temperature, and dust-measuring equipment, both on-site and off-site. A full maintenance and repair service is available across a wide range of instruments. The company offers technical consulting and project management services, helping clients save time while delivering competitive pricing and high-quality solutions. As an OEM provider, most products and systems are locally designed and manufactured to meet specific customer requirements.

AMS. Haden are distributors for several leading brands, which include: Casella CEL, U.K; Thermo Fisher Scientific, U.S.A; Greisinger, Delta Ohm, Germany; Pinssar, Australia; TSI Alnor, U.S.A; G.H Zeal, U.K; Pacific Data Systems, Australia; Gill; Gastec; Clean Space, Australia; Exsens S.A; LSI Lastem, Italy; Hikvision; Golden Win3, China; Denwa Group of Companies.

50 Years experience in the mining, industrial, and plant sectors, AMS Haden aims to provide customers with turnkey solutions in the electronic and instrumentation fields.



## **OUR CLIENTS:**



DE BEERS



### VISION:

We provide innovative turnkey solutions, to comply with health and safety regulations, meet milestones and aim for zero harm. We strive for sustainability and for the upliftment of our employees

### MISSION:

To support our clients in the mining, industrial and medical space to achieve zero harm in the working environment through the use of technology

### VALUES:

To develop & sustain our people, environment and communities through responsible leadership & business ethics



## DISTRIBUTORS FOR:

**CASELLA**

**ThermoFisher**  
SCIENTIFIC

pacific data systems  
Solutions. Technology. Simple.



**blacklinesafety**

**DeltaOHM**  
Member of GHM GROUP

**ZEAL**  
Established 1888

**GREISINGER**  
electronic



**TSI ALNOR**



**GILL**



**CASIO**



**GASTEC**  
GAS DETECTOR TUBE SYSTEM



**RioTinto**



**GLENCORE**



# INDEX

## 1. OCCUPATIONAL HYGIENE

- Noise & Sound
- Dust & Airborne particulates
- Ergonomics & Vibration
- Heat Stress
- DPM (Diesel Particulate Matter)
- Illumination & Light Source

## 2. SAFETY

- Cap lamps & Mine Lighting (Intrinsically safe)
- Gas and Smoke Detection (Portable & Fixed systems)
- Proto Kit
- Refuge Bay Equipment, Emergency Systems, Complete Refuge Bay Kits and Compressed Air Silencers.

## 3. ENVIRONMENTAL MONITORING

- Weather Stations
- Boundary Monitoring for Dust, Noise & Gases
- Air Quality
- Water Quality
- Underground Condition Monitoring (REMS)

## 4. HVAC

- Airflow
- Pressure (Air)
- Temperature
- Automation & Control
- Compliance

## 5. MINE VENTILATION

- Observer Kit (All hand-held and portable instrumentation)
- Stationary Sensors and Transmitters

## 6. SMART RISK MANAGEMENT SOLUTION

- Smart Environmental Monitoring
- Smart Fire Prevention Solutions
- Smart Camera Solutions
- Smart Management Software
- Active and Passive Personnel Asset Tracking and Tagging Systems
- GSM Monitoring and Control Systems
- Solar, Battery Backup and Power Solution Systems
- Application Engineering (Custom Systems)
- Design and Manufacturing of Health and Safety Products, Devices and Systems (OEM Company)
- Laboratory Telemetry, Monitoring and Control Systems
- General Custom Designs - Electronic Signs, Production, Safety Screens and SCADA Systems
- Distributed Temperature Sensing and Distributed Acoustic Sensing systems
- Fire Detection
- Fire Suppression Systems
- Dust Suppression
- Universal Controllers
- Switchgear
- Complete Monitoring and Control Systems for the Mine, Health and Safety Industry





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## 1. Occupational Hygiene



### Featured Product

#### **Casella DBadge2** Noise Dosimeters

- Bluetooth® 4.0 wireless connectivity
- Airwave App for Mobile devices such as phones and tablets
- Multiple 'simulated' dosimeters
- Full color display



### Noise Signs

#### **Customizable Digital Signs & Products**

- 110 – 230 Volt AC Power with Battery backup options
- Continuous 4–20mA Output for SCADA Monitoring
- Red / Green Visual Warning Indication
- Digital Display with 50m viewing distance



### Acoustic Calibrators

#### **Casella Acoustic Calibrators**

- The field calibration of Sound Level Meters is an essential procedure when carrying out any type of noise survey both before and after each measurement sequence
- Class 1 & 2 accuracy versions
- Digital technology ensures highly stable acoustic performance



### Sound Level Meters

#### **Casella Sound Level Meters**

- Simple operation
- Rugged design
- High resolution display
- Latest digital technology





## Dust & Airborne Particulates



### Featured Product

#### IoDust

##### Continuous Laser Dust Monitor

- Fixed Real-time Particulate Monitor
- Types of Measurements: PM1.0, PM2.5, PM10 and TSP (Total suspended particles)
- Measurement Range: 0-30 000 ug/m<sup>3</sup>
- Input Power: 10-30V input Voltage
- 4-20mA Output: Non loop powered 4-20mA channel – Configurable to output
- RS485 Modbus RTU RS485 channel to configure device
- I.S Approved



#### Particulate monitor

##### Exsens Portable Real-Time Particulate Monitor

- This instrument measures personal exposure of respirable dust particulates, PM1, PM2.5, PM4 and PM10 with a concentration range up to 1000ug/m<sup>3</sup>
- Data logging and download capabilities

#### Dust Monitor

##### Real Time Dust Monitor

- Real-time graphical display of dust levels
- Simple icon driven user interface
- Extensive range: 0.001mg/m<sup>3</sup> to 250g/m<sup>3</sup> (Auto-ranging)
- Unique removable sampling probe







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## Sampling Pump

### Casella Apex 2

- Personal Sampling Pump
- Class beating performance
- Bluetooth® and Airwave app
- Lightweight and Ergonomic
- Motion Sensing



## Air Sampling

### Flow Detective

- Calibrator for air sampling pumps
- High accuracy calibration
- Pulsation detection
- Simple operation
- Rugged design

## Air Sampling Pump

### Vortex3 High-Flow Air Sampling Pump

- Ideal for area sampling for airborne contaminants including Asbestos and other hazardous materials.
- The Vortex3 is the latest generation of static, high flow rate sampling pumps
- Can now be controlled and monitored from your mobile phone or tablet



# Ergonomics & Vibrations

## Vibration Meters



### Casella HAVex

- Simple operation
- Robust accelerometer & cable
- Color display
- Stores over 900 measurements

### Larson Davis Human Vibration Meter

- Control and view data from a mobile app
- Removable micro SD memory card
- USB 2.0 and Wi-Fi
- ISO 8041:2005 compliant

# Heat Stress

## Heat Monitoring

### LSI Heat Shield

- Quick, real-time, reliable, and accurate assessment of indoor and outdoor WBGT index
- Real-time assessment of the PMV-PPD index (ISO7730)
- Verification probe for assessment of the system calibration



### Kestrel 5400

- Measures Wet Bulb Globe Temperature (WBGT), Thermal Work Limit (TWL), heat index, temperature, humidity and much more. 15 measurements in all
- Waterless! Natural Wet Bulb Temperature accurately calculated from on-board digital sensors with no tedious setup or maintenance

## Ventilation

### Whirling Hygrometer

- The whirling hygrometer also known as a sling psychrometer is made from two thermometers mounted on a frame which rotates around a handle, so it can be whirled in the air by hand



# DPM

## DPM Reader

### PDS (RT DPM) Tailpipe

- Instant measurement of fine particulate levels in diesel exhaust
- Easy to use, on-screen prompts, minimal (<10min) training required
- Designed to handle the rugged demands of mining sites
- Auto-generates & displays Stall or Free Acceleration test results



### Pinssar Stationary DPM Reader

- Saves lives by reducing exposure to DPM
- Gives people greater confidence when working in confined spaces
- Demonstrate the importance the company places on employee health and safety
- Verify the effectiveness of existing controls, such as ventilation





# AMS HADEN

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## Illumination



### Featured Product

## Fixed Vehicle illumination system

- 9 and 15 Lux Sensor configuration system
- 9 x Lux Sensor Software Application, Downloads via USB or Ethernet)
- Custom Panels with Lux Sensors (IP65) SABS Approval certificate number:2330HE011
- Data Acquisition Unit – Touch Screen User interface complete with data logging ability / historical data storage



## Illumination Verification

### Lux Meters



#### Goldilux

- Auto ranging
- Large LCD Display
- Measurement of Illuminance (lux or foot-candles) over a wide range
- Light weight

#### Goldilux LED Lux Meter

- Large LCD Display
- Measurement of Illuminance (lux or foot-candles) over a wide range
- Light weight



### Light Meter



#### Lutron Lux Meter, LX -101

- Sensor used the exclusive photo diode & multi-color
- Built-in low battery indicator, correction filters, spectrum meet C. I. E. standard
- LSI-circuit use provides high reliability and
- Sensor COS correction factor meet standard durability



## 2. Safety



### Featured Product



### K5D 9 Ah and 12 Ah battery Cap Lamp (X-Lite)

- Up to 30 hours on main LED
- Additional 10 hours on auxiliary
- Minimum 6500 LUX on main LED
- IP68 protection rating
- WiFi enabled
- Shaft clearance, Last known Position
- Cap lamp battery and network status

### Miners Lamps

#### Cordless Cap Lamp

- Mining, Plant and Industry use
- IP65 protection rating
- Minimum 4500 LUX on main LED



### Custom Solutions

#### Proto Kit

Configuration:

- 2 x X4 Gas Instruments
- 2 x K5D Lamps
- Manual Calibration and test point
- Battery back-up
- Portable Carry-case included
- Downloading PC included

### Safety Signs

#### Various Signs

- 110 - 230 Volt AC Power with Battery backup options
- Continuous 4-20mA Output for SCADA Monitoring
- Digital Display with 50m viewing distance
- Measuring parameters: Noise, Temperature, Blasting Panels, Time





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## Cap Lamp Verification

### Digi-Illumination Tunnel

- Cap Lamp Verification
- Factory calibrated and preset to 2000 lux to provide the user with a visible RED/FAIL and GREEN/PASS indication



## Racks

### Charging Racks

- Custom built according to needs
- Available in 5, 10, 30, 120, 160 & 200 Point

## GAS AND SMOKE DETECTION (Portable & Fixed Systems)

### Smoke Detection

#### AMS 501 Smoke Detector

- High sensitivity and adjustable sensitivity
- Two independent relay outputs (first & second alarm)
- Optional audio & visual alarm signal
- Operating Temperature: -40 ~70
- Relative Humidity: 95%



### Portable Gas Detection

#### ExSens X4 & X4-2 WiFi Gas Instrument

- WiFi enabled: real time gas and location monitoring
- 6x Simultaneous gas measurements
- Battery life: up to 24HRS
- Web based interface



### Fixed Gas Detection

#### Exsens Fixed Gas Detection monitor

- Supports all flammable and toxic gases (4-series sensor technology)
- Local display and A/V alarm
- 4-20mA output
- RS 485 output
- Relay output



### SCADA Controller



#### Programmable Fixed Gas Detection Controller:

- Large local display and keypad interface
- 8 x analogue input
- RS485 input and output (MODBUS)
- 6 x Configurable relay output

### Blackline Safety



#### Real-Time Visibility, Real-Time Safety

Real-time awareness of your people and places empowers a more informed response should the worst occur. G6 and G7 wearables and G7 EXO portable area monitors, with unmatched connectivity and accurate location technology, deliver ultimate visibility across your worksites

### Custom Solutions

#### Refuge Bay Solutions

- Complete refuge bay emergency medical kit with spine board, spider harness, first aid kit and blanket
- Electronic LED sign – Standard or with battery back-up
- Complete 24m kit for refuge bay includes 25mm and 50mm galvanised piping; ball valves; air whistle, CAS001FB Silencer; flanges and couplers
- Air whistle kit, Drinking water kit, 70 and 125lt waste bins Mediloo (First Aid Capsule transforming into Toilet)





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## 3. Environmental Monitoring



### Featured Product



### REMS

#### Real-Time Environmental Monitoring System

- Fixed applications
- Onboard data logging
- Real-time monitoring with display
- Audio and multicolor visual alarm indication
- Measuring up to 10 different parameters including gasses
- Environmental monitoring (WB/DB/Humidity/BP/velocity)
- Communication/network status indicating
- Real-time date and time indication
- Modbus TCP (Ethernet), Modbus RTU (RS485), WiFi (IOflow Interface)
- I.S Approved

### Velocity Monitoring

#### Ultrasonic Velocity sensors

- Velocity meter (Direction)
- Quality Measurements
- Lightweight and Robust
- Low Power Mode



### Weather Monitoring

#### Davis Weather Station

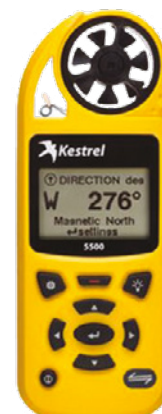
Wireless Weather Stations include two components: The Integrated Sensor Suite (ISS) which houses and manages the external sensor array; and the console which provides the user interface, data display, A/D conversion, and calculations

# INNOVATING TOWARDS **Zeroharm**

## Weather Meter

### Kestrel 5500

- Large, hi-res, hi-contrast, graphic display is perfectly readable in the brightest sunlight and is backlit for nighttime use.
- Optional Link connectivity powered by Bluetooth Smart® provides wireless communication to mobile devices and computers



## Temperature Meter



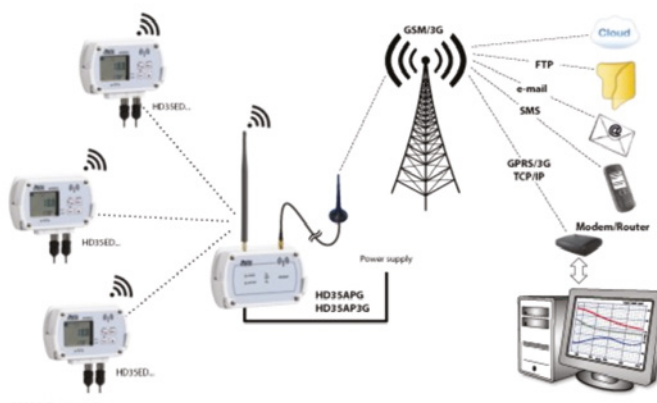
### Greisinger PH & Temperature

- For comfortable measurements of pH value and temperature Double display for pH or redox and temperature
- Redox mode allows for automatic conversion to a hydrogen system
- Automatic or manual temperature compensation
- Automatic buffer detection

## Weather Monitoring

### DELTA OHM Network

- Quick and easy installation
- Reduction of installation costs
- Flexibility of the system
- Low maintenance







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## Monitoring



### **DUSTROID®**

*Dustroid is the answer for businesses that require pinpoint dust monitoring. From construction sites and mines to ports, we have got the air quality covered from the tiniest PM1 particles to the largest PM100.*



## Odour Monitoring

### **ODOSENSE®**

*Odosense is the real-time odour emission tracking solution. Odosense continuously detects, measures and monitors the odourful gaseous contaminants*



## Pollution Monitoring

### **POLLUDRONE®**

*Polludrone is a Continuous Ambient Air Quality Monitoring System (CAAQMS). It is capable of monitoring various environmental parameters related to air quality, noise, odour, weather, radiation etc*



## Weather Monitoring

### **WEATHERCOM®**

*Weathercom measures meteorological parameters such as wind speed & direction, rainfall, visibility, UV-radiation, light intensity, temperature, humidity, pressure, etc*

HVAC



## 4. HVAC



### Featured Product



## Airflow Micromanometers

- Measure differential and static pressure from  $-3735$  to  $+3735$  Pa ( $-15$  to  $+15$  in. H<sub>2</sub>O)
- Calculate and display velocity when using a Pitot tube
- Calculates volumetric flow rate in duct from velocity and user-input duct size and shape

### Air Flow

#### TSI 7545

- Temperature and relative humidity measurements help determine thermal comfort
- Directly calculates dew point and wet bulb temperatures
- Electrochemical sensor measures CO
- Calculates % outside air from either CO<sub>2</sub> or temperature



#### Airflow LCA501 Anemometers

- Model LCA501 is a light weight, robust, and simple to use Rotating Vane Anemometer that provides accurate and reliable readings every time. Reversible 100 mm head allows readings at supply and extract grilles
- Calculates volumetric flow rate

#### Airflow Hot Wire

- Accurate air velocity measurement
- Large, easy to read display
- Calibration certificate included





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## Airflow Balometer

- Ergonomic design and ultra-light weight for easy, one-person operation
- Automatically senses and displays supply or return flows, saving time on the job
- Back pressure compensation ensures accurate readings

## Pressura – For Critical Environments

- Continuously measures room pressure
- Audible, visual alarms warn of loss of containment
- Accepts optional key switch for use when room is not occupied
- Communicates with building management system using analogue output



## 5.Mine Ventilation



### Featured Product



## Digi Velocity Tunnel

- The latest innovation to accurately test the air-flow measurements of Pocket/Hand-held anemometers, prior to use
- A sensor is connected to a digital display to confirm the reading of the anemometer
- The unit is supplied with a calibration certificate and a user manual

### Ventilation

## Gastec

GASTEC Detector Tubes indicate concentrations directly by way of a calibrated scale printed on the tubes. GASTEC tubes are highest quality detector tubes for analyzing airborne gases/vapors, as well as pollutants in soil and water





## Pitot tube

Flow measurement device used to measure fluid flow velocity

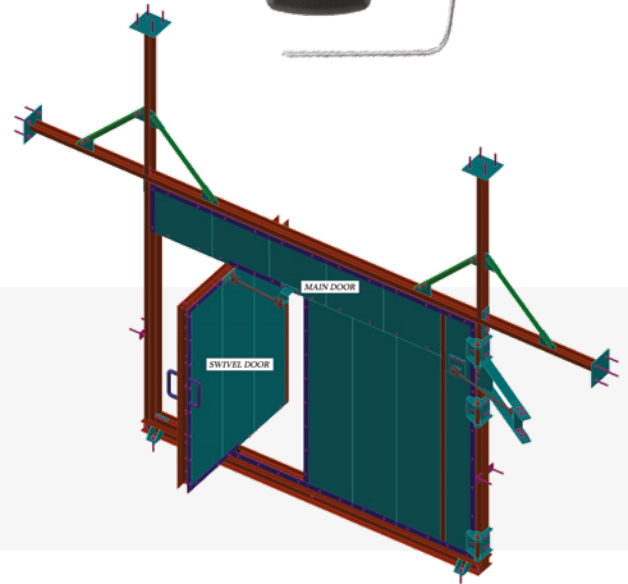


## Laser Distance Meter

- Distance measurement
- Addition
- Subtraction
- Area measurement

## Mine Ventilation Door

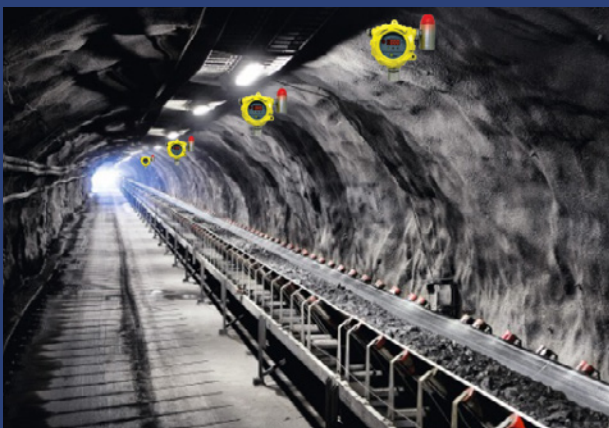
- High & low Pressure Fire Doors
- Louvre Air Control Regulator



## 6. Smart Risk Management Solution



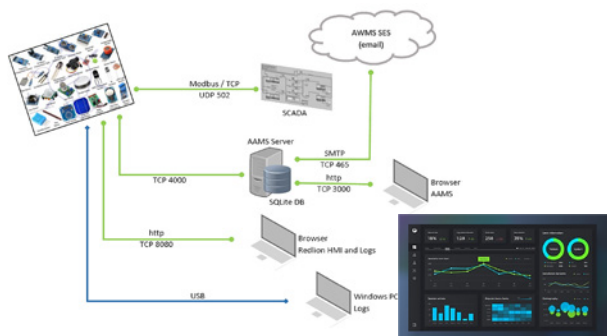
**Featured Product**



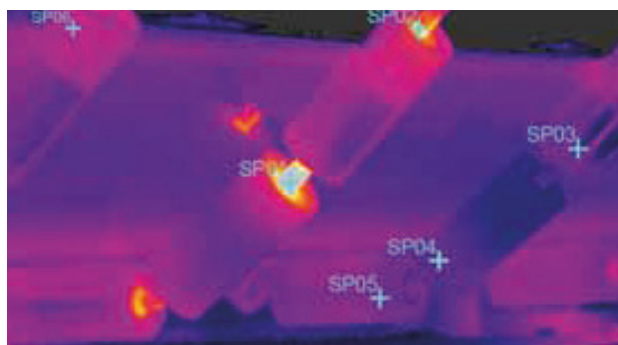
## Fire Protection Solutions

At AMS Haden we provide a wide range of risk-management solutions. Driven by our industry insights and appetite for innovation, we have a stable of products that include the most advanced condition monitoring and fire prevention systems in the world, as well as best-in-class fibre optic sensor tech and security systems

- Distributed Temperature Monitoring
- Distributed Acoustic Monitoring
- Fire Suppression Solutions
- Combined Fire Prevention Technologies



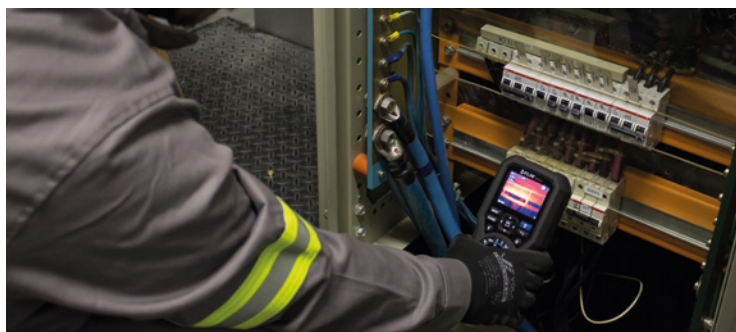
- Switchgear Monitoring, Panel Enclosure Monitoring & Fire Detection Solutions
- Access Control, People Counting & PPE Detection
- Electronic Logbook Management
- Theft or Malicious Damage Prevention



- *Storage/Charging Bay Monitoring*
- *Fire Detection and Prevention Solutions*
- *Facial Recognition – Facial in vs Facial out gender ID*
- *People Counting and Heatmapping*
- *Unauthorized Personal Detection*
- *Accurate Equipment Allocation*



*Basic Protection Logic, Basket of Sensors, Basic Communication, Fibre, Dashboards, Architecture (Adroit Smart Scada Platform) - Reporting Service, Intelligence, Alarm Management, Data Server*



- Belt & Roller Monitoring
- Handheld Maintenance Tools
- Theft or Incident Detection
- Distributed temperature monitoring
- Distributed acoustic on conveyor belts



- *Environmentally friendly*
- *No toxic elements*
- *No solvents*
- *Ammonia free*
- *Glycol free*

- Dust suppression liquid
- Available in 5L and 20 L







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