

**Central Technical Supplies (Pty) Ltd.**

# **YOUR PARTNER FOR ALL INDUSTRIAL REQUIREMENTS**



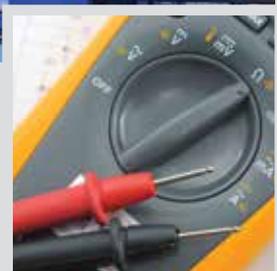
**INDUSTRIAL LAUNDRY**



**AUTOMATION**



**PHOTOVOLTAIC SYSTEMS**



**INSTRUMENTATION**

**WWW.CTSNAM.COM**

# CENTRAL TECHNICAL SUPPLIES (PTY) LTD.

**Central Technical Supplies (Pty) Ltd.** formerly known as “Geiger Electrical and Mechanical Engineering” was founded in 1980 by Mr F. J. Geiger. With only a few employees the main business core focused on the repair and service of industrial washing machines, standby generator sets as well as switchboards. As the company grew over the years, so did its experience in other fields of business and a name was made in the installation of steam generation plants, autoclaves and incinerators country wide.

In 1995 Central Technical Supplies was founded as a daughter company of Geiger Engineering with its main focus on supplying the Namibian industry with products from the automation field as well as steam accessories, industrial control products and much more. Well-known brands such as Fluke, Danfoss, Mitsubishi and others became associated with CTS over the many years of service.

Ten years after the founding of CTS, Geiger Engineering and CTS merged in 2005 and became known as **Central Technical Supplies (Pty) Ltd.** With our wide product range for the Namibian industry and experienced installation teams that travel country wide routine service jobs and installations are carried out.

With the opening of a branch in Walvis Bay during 2003, CTS is able to serve the coastal regions better with its marine and mining activity. Equipment services and repairs are handled by our coastal workshop for clients along the central coast.

## **MAJOR MILE STONE PROJECTS OVER THE MANY YEARS OF EXISTENCE ARE:**

1. Various laundry installations country wide from small to large
2. Steam installations from reticulation to boiler installations and service
3. Oshakati hospital laundry (2006)
4. Upgrading of the Goreangab PSA plant to increase the ozone generation capacity
5. Various incinerator installations country wide, mainly at government clinics and hospitals (ongoing)
6. Hilton Hotel Windhoek gas fired hot water system (2010)
7. Solar hot water system for Farmers Meat Market Mariental (2012)
8. Supply and installation of automatic weather stations in Botswana (2014/2015)
9. Installation of automated weather monitoring system at Oranjemund Airport (2015)
10. Supply and installation of PV Offgrid Container systems in the Otjozondjupa Region. (2018)

With our fleet of 4x4's, 1.5T bakkies and a 26T crane truck we are able to reach virtually any destination within Namibia and abroad to keep our customers happy.

## **CONTACT**

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[www.linkedin.com/company/central-technical-supplies-geiger-engineering-](http://www.linkedin.com/company/central-technical-supplies-geiger-engineering-)

**WWW.CTSNAM.COM**

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# OUR SERVICE PROMISE

## DESIGN

Our skilled technicians and engineers can design a solution for your requirements, be it:

- ▶ Complete Laundry Solutions
- ▶ Solar Water Heating Plants
- ▶ Off-grid Photovoltaic Plants
- ▶ Steam Generation Plants
- ▶ Incineration Solutions
- ▶ Automatic Weather Stations

to name but a few.

## SUPPLY

All our products are shipped country wide.

## INSTALLATION

Our professional installation team ensures that your products are correctly installed no matter where in Namibia you are. No distance is too long for us. From small laundry installation to moving of large incinerators for medical waste disposal, we are equipped to do the job.

## MAINTENANCE

We offer after sales service and technical support. Our dedicated service team can service your equipment all over Namibia, preventing unwanted downtime. With our service agreements you can be rest assured that your equipment is looked after by qualified technicians. Various agreements, depending on your requirement, are available. Speak to us for more information.

### DESIGN



### SUPPLY



### INSTALL



### MAINTAIN



# VISION

*To be the centre of choice of all Technical Supplies and Services throughout Namibia.*

## MISSION

To understand our customers' needs and to become their solution provider by helping them master their challenges, becoming more efficient and sustainable in our ever demanding and challenging environment.

## VALUES

### TEAMWORK

To sacrifice personal needs and to work together to achieve our mission and vision

- Internal (Cohesion between different departments of CTS)
- External (Cohesion between CTS, our suppliers and customers)

### ACCOUNTABILITY & INTEGRITY

To keep up to promises

### DIVERSITY & QUALITY

To provide the most effective solution for the customers' needs

### CUSTOMER SERVICE

Understanding and satisfying our customers' needs

### PROFESSIONALISM

To continually increase our personnel's excellence and competence to meet the needs of our customers' as effectively (good) and efficiently (quick) as possible

### COMMUNICATION

To receive and convey information and documentation between customers, suppliers and each other effectively and efficiently to reach a mutual and satisfying understanding

### EQUITY

Fairness & Impartiality - we respect each other

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## LEASING OF TEST EQUIPMENT

### VARIOUS DEMO EQUIPMENT IS AVAILABLE FOR LEASING FROM CTS.

#### TYPICAL PRODUCTS\* ARE:

- ▶ Nivus flow meter (PCM Pro Logger + Sensor POA-V1U1KTE10F0)
- ▶ Fluke Thermal Imager
- ▶ Fluke Power Analyser
- ▶ Fluke Scopemeter
- ▶ Testo Saveris Temperature Logging System
- ▶ Fluke Multifunction Tester
- ▶ 10T Load Cell for Lifting Equipment
- ▶ Seaward PV200 Solar Test Kit

#### **DEMO EQUIPMENT IS ALSO AVAILABLE FOR SALE AT A REDUCED PRICE. PLEASE DO SPEAK TO US FOR MORE INFORMATION.**

Rest assured that your equipment is looked after by qualified technicians. Various agreements, depending on your requirement, are available. Speak to us for more information.

*\* Demo list as of October 2018. Individual items may differ and change depending on actual purchase request and supplier availability.*

# OUR MAIN SUPPLIERS AT A GLANCE

## FLOW SENSING



When it comes to process measurement, ISOILS's level of experience is unique, not just in standard applications but also for those challenges that demand customized solutions. Talk to us - CTS - about your measurement challenges now.

## TEST & MEASUREMENT

Be it your industrial plant or animal clinic, CTS can offer a wide range of test and measurement equipment. From multimeters, to thermal imagers, from power loggers to vibration analysers, all under one roof.



## TEST & MEASUREMENT - HIGH VOLTAGE

Are you working with any electricity supplier (RED)? If so, you have to make sure that your grid is fully functional at all times. With CTS you have access to the full range of Megger test equipment for fault location, earth fault locators, circuit breaker analysers, cable fault locators to name just a few.

## PUMPS

Without pumps modern life would not be possible, your plant would not be functional. CTS is the official reseller of high quality pumps manufactured in Italy, the Calpeda brand.

## FLUID CONTROL

Where there are pumps, there is liquid that needs to be controlled. As the official distributor of the full range of Bürkert products CTS is able to assist you with German quality you can trust.

## VARIABLE SPEED DRIVES

If you have pumps, you have electrical motors which need control. With access to the entire range of Danfoss and Mitsubishi speed drives and soft starters we can trim your factory to energy efficiency.

## INDUSTRIAL AUTOMATION

Without automation, your factory will not be efficient in today's production requirements. Automation is the key to success and CTS is your partner for the best in automation equipment. As an authorized reseller of Phoenix Contact products we have access to more than 65,000 products.

## INDUSTRIAL SWITCHGEAR AND PROTECTION

If you have a factory, you require protection, if you operate a photovoltaic plant, you require protection, in life as we know it protection is a must. With Eaton on our side we do have solutions for all your needs for protection and switchgear.

# OUR MAIN SUPPLIERS AT A GLANCE

## LEVEL & PRESSURE MEASUREMENT

# VEGA

Without level/pressure transducers automation is not possible. Vega sensors are state of the art German engineering suitable for installation in the harshest environment.

## TEMPERATURE SENSORS



No plant is complete without temperature monitoring. From simple switching of fans to complicated process control, temperatures need to be measured. We can supply temperature sensors for the most demanding applications as well as all sorts of heating elements, from a few kW to several 100kW, whatever you require.

## STEAM APPLICATIONS

# spirax sarco

Are you running a factory that requires steam? Then you've come to the right place. We can assist you with all your steam requirements, from control to safety, from design to installation. With Spirax Sarco as our partner you have quality on your side.

## HEAT EXCHANGERS



Energy is becoming a scarce commodity. Energy efficiency is becoming more and more important. With Alfa Laval heat exchangers we can transfer your heat energy. Whether your requirement in steam applications or water heating, we can supply it.

## TEMPERATURE/PRESSURE GAUGING

# ASHCROFT

Temperature and pressure gauging is crucial to keep your plant running. Quickly glancing at a gauge can tell you more than reading a digital display. Are the fluctuations in order? How far from full scale is your current operating point? All this in just a few milliseconds. Saving you valuable time to attend to other needs. With access to the Ashcroft range of gauges we are your partner in gauging for all types of processes.

## INDUSTRIAL LAUNDRY

# Miele

After a successful day at the factory uniforms usually emerge heavily soiled. Let us assist you in getting your laundry clean and hygienic again for the next day. Be it for just a few workers or many hundred. With access to the full range of Miele industrial washing machines, tumble dryers and roller ironers you can clean your laundry in a breeze with gentle care. Giving you more time at your factory and less worry about dirty laundry.

## PROFESSIONAL METEOROLOGICAL EQUIPMENT

# VAISALA

And last but not least CTS has access to Vaisala environmental monitoring equipment. If you are active in the meteorological field, chemical industry or research sector, environmental conditions are important and need to be monitored. Whether remotely or locally, we can do it.



# ENCLOSURES



Together with Elen Enclosures, CTS can offer high quality enclosures. Wall or floor standing, the quality remains the same. The enclosures are made of insulating material designed to protect your equipment in aggressive or harsh environments (fiberglass, mild steel, etc. ). A wide variety of IP ratings are available, ensuring you the best possible solution for your application.

## SOME OF OUR PROJECTS:

- In-house control panel building for various incinerator projects country wide.

## INDUSTRIES:

**WATER AND WASTE WATER**

**MINING**

**PROCESSING**



# FLOW SENSING

Water is precious. The water industry provides drinking water, as well as waste water. Careful monitoring is required.

CTS has access to products covering a wide range of metering devices for flow, level, pressure, water quality, density and turbidity, and even devices and software for detection, transfer, recording and evaluation of data.

Our full range of electromagnetic-, mass-, and ultrasonic flow meters, are available in compact or separate version, wafer or flanged mounting, with a wide range of options for electrodes and lining materials. GPRS, HART, Profibus and Modbus available, as well as battery operated systems.

For portable or fixed installations Nivus, made in Germany, is the answer for your short- or long term measurement. Be it in open channels, larger pipe diameters or river levels accurate measurement is possible.

## SOME OF OUR PROJECTS:

Leasing of Nivus portable flow measurement unit for a survey of sewerage capacity in Katutura area.

## INDUSTRIES:

**WATER AND WASTE WATER**  
**FOOD AND BEVERAGE**  
**MINING**



**bürkert**  
FLUID CONTROL SYSTEMS

**OFFICIAL  
DISTRIBUTOR**

When it comes to measurement and control in working with fluids and gases, Bürkert is the leading brand name that springs to mind. We offer the full range of Bürkert products, including solenoid and process valves, process pneumatic valves, sensors and controllers and can provide a complete system and application solution to meet your specific requirement.

Being the official distributor for Bürkert, Central Technical Supplies keeps stock of a wide variety of the most commonly used solenoid valves with a variety of coil voltage ratings.

## INDUSTRIES:

**FOOD AND BEVERAGE**

**MINING**

**WATER AND WASTE WATER**



# HEATING AND HEATING CONTROL



Thermon is our partner for all your heating requirements. Our portfolio covers products such as:

- custom build heating elements
- temperature probes (thermocouples, PT100, PT1000, etc.)
- temperature controllers (such as the widely used Gefran 600 programmable PID )
- heat-trace cables to keep your system heated at all times.

We do keep stock of the most common used elements, temperature controllers and temperature probes.

## INDUSTRIES:

**MINING**

**FOOD AND BEVERAGE**





CTS, together with EATON, can assist you with managing your power more reliably, efficiently, safely and sustainably. A focus on electrical power management is critical to the success of your business. We supply switchgear, from low voltage, medium voltage to high voltage, automation products, ring main units or any other type of electrical equipment that is required in the power sector of the Namibian industry.

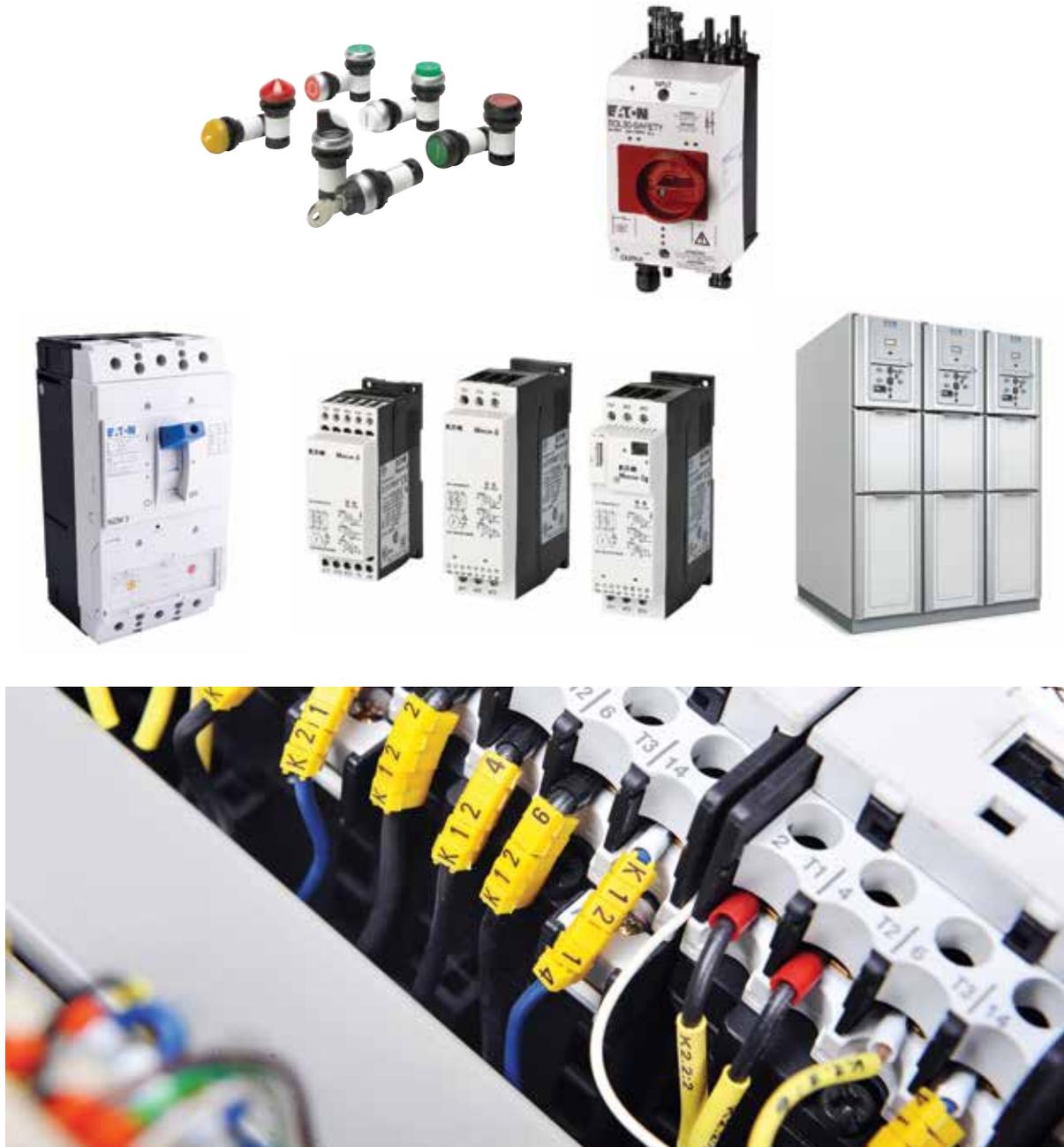
Various products such as DC circuit breakers, fuses and safety switches for the photovoltaic sector are also available through us.

## INDUSTRIES:

**FOOD AND BEVERAGE**

**MINING**

**WATER AND WASTE WATER**



# INDUSTRIAL AUTOMATION



OFFICIAL  
DISTRIBUTOR



As the official reseller of all Phoenix Contact products in Namibia, we do have access to more than 65,000 single product items.

The **Clipline** range features all sizes and types of terminal connection technology. Spring cage cable connection or screw cable connection, 0.1 sqmm to 120 sqmm, we have the solution for your wiring connection. Furthermore the Phoenix Contact marking system for terminal, conductors and device marking is also available.

The **Pluscon** range of field cabling caters for all inter-equipment wiring in your factory with various IP ratings and current carrying capacities for signals, data as well as power applications.

The **Combicon** range caters for PCB based connection technology in the industrial field.

The **Trabtech** range combines the best of technologies in the surge protection and lightning protection industry. Be it for AC power lines, DC applications (typically photovoltaic grid feed systems) or signal lines, Trabtech is the solution for you. With its range of uninterruptable power supplies, EMC solutions as well as monitoring solutions, the answerer to a complete solution is at your hands.

The **Interface** range caters for all types of signal conversion technologies, temperature to mA transducer, mA loop splitter, relays, power supplies and many more. We can supply the solution to your interface requirement.

The **Automation** range completes the production line of Phoenix Contact by adding state of the art PLCs, HMI units, industrial PCs to automate your plant with ease.

We do keep stock of power supplies, relays, terminals, various marking technologies, liquid level relays and phase failure devices to name a few.

## INDUSTRIES:

**WATER AND WASTE WATER**

**FOOD AND BEVERAGE**

**MINING**



# LEVEL AND PRESSURE MEASURING

# VEGA

**SOLE  
DISTRIBUTOR**



Together with VEGA, we can provide you with solutions for a wide range of level and pressure instrumentation for all industrial requirements. VEGA's sensors include measurement of level, point level, pressure and density, as well as the software for integration into process control systems. VEGA is known for its high standards in reliability, accuracy and economy in the industrial environment.

## MEASURING PRINCIPALS INCLUDE

- ultrasonic
- guided microwave
- radar
- capacitive

## INDUSTRIES:

**MARINE  
FOOD AND BEVERAGE  
WATER AND WASTE WATER  
MINING**

*\*search App Store for Grieshaber*



# POSITIONERS



Accurate and efficient process control require feedback to the controlling unit. This is achieved by state of the art Positioners from ABB, be it conventional, digital positioners or I/P converters. CTS does have a solution for requirements.

Various input control signals (4-20mA, ModBus, 24V Pulse, etc.) guarantee flexibility in plant design and process control.

These positioners can virtually mounted on any existing actuator to guarantee accurate and reliable feedback.

## INDUSTRIES:

**MINING**

**FOOD AND BEVERAGE**

**WATER AND WASTE WATER**



# SENSORS AND SWITCHES

With sensors from Leuze Electronics and EGE, CTS is able to offer a wide range to suit your plant, be it flow sensing, level sensing, proximity switches, barcode reader, high speed counters and many more.

We do have an answer for your sensing requirements, be it specialized or straight forward, motion or flow sensing.

Sensors and switches generally interface to counters for processing purposes; with Hengstler counters we do have a quality product that meets your requirement.

## INDUSTRIES:

WATER AND WASTE WATER

FOOD AND BEVERAGE

MINING



**SOLE  
DISTRIBUTOR**

**Leuze electronic**

the **sensor** people



**SOLE  
DISTRIBUTOR**

**HENGSTLER**

**SOLE  
DISTRIBUTOR**



# GASKETS, PAKING AND INSULATION



Gaskets are used throughout various industrial markets and Teadit® is recognized as a world leader in the development and manufacturing of innovative fluid sealing products. CTS stocks a broad range of sealing products, ensuring that we will meet your demands every time.

In addition to gasket material we also do keep stock of various insulation material, be it fiberglass sheeting, preformed fiberglass pipe lagging or PVC pipe insulation. No heating job is complete without insulation products supplied by CTS.

## TYPICAL APPLICATIONS ARE:

- Hot water pipe insulations
- Fibreglass sheeting for any type of tanks
- Gaskets for steam applications



# HEAT EXCHANGER



**OFFICIAL  
DISTRIBUTOR**

Alfa Laval, together with Central Technical Supplies, is your partner for all types of heat exchangers, helping you to optimize your processes. We can meet virtually any operational specification, ranging from the most delicate to the most aggressive environments, providing solutions that optimize energy utilization while minimizing downtime.

## SOME OF OUR PROJECTS:

1. Farmers Meat Market Mariental – solar hot water generation plant. Heat exchangers are used to isolate the main glycol loop from tap water as well as refrigeration plant discharge loop.

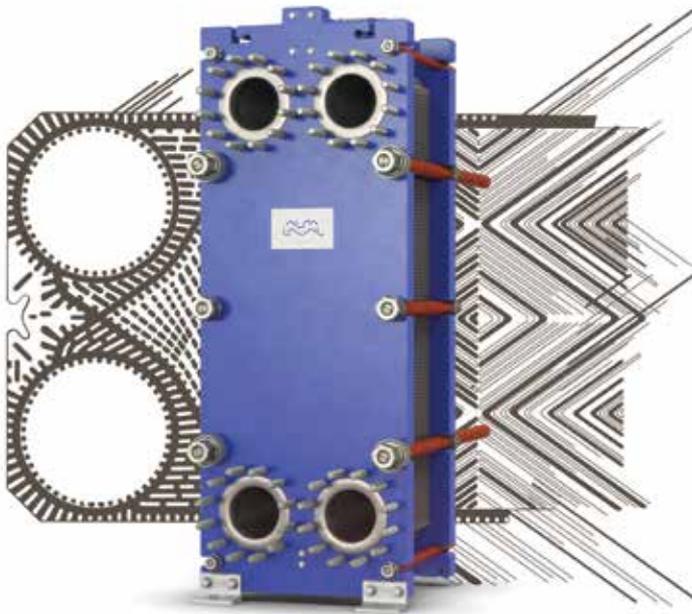
## INDUSTRIES:

**MINING**

**MARINE**

**WATER AND WASTE WATER**

**FOOD AND BEVERAGE**



Get the **Alfa Laval Insights App** for amazing product insight.



# STEAM/HOT WATER BOILERS AND ACCESSORIES

We are an established name in the steam and hot water generation business. With many years of experience and turnkey projects country wide, we are proud to be associated with quality products such as:

## BURNERS



**Ecoflam**

*Lamborghini*

## BOILERS



## ACCESSORIES



**spirax sarco**



### OUR SUPPLY OF ACCESSORIES INCLUDES BUT IS NOT LIMITED TO:

- Flow switches
- Temperature control
- Boiler control
- Total dissolved solids (TDS) control
- Steam traps
- Safety valves
- Paking and gaskets
- Insulation
- Pressure reduction

### INDUSTRIES:

**FOOD AND BEVERAGE  
MINING**

**DID YOU KNOW?**  
Smart Phone App  
available from Spirax Sarco

# INDUSTRIAL LAUNDRY EQUIPMENT




We have specialized in the design, supply and installation of all sorts of industrial laundry solutions. Be it from small guest house laundries to high volume industrial or clinical requirements. We surpass your expectations.

With washer extractors from 5kg up to 120kg per load (dry) as well as state of the art washing programs that are gentle on your washing, you can have peace of mind.

Our tumble dryers range from 5kg to 40kg capacity (wet load) to speed up your washing cycle and reduce aging of your laundry.

To complete your laundry solution, rotary ironers in various sizes form part of our portfolio, able to process large number of items, be it sheets, pillow cases, table cloths or napkins.

## INDUSTRIES:

**MEDICAL**  
**HOSPITALITY**  
**MINING**






# AUTOCLAVES

Sterilization in laboratory and hospital environments has its unique requirement. Choosing the right steam sterilizer depends on several considerations: load diversity, frequency of use, available services and load volumes.

CTS can supply autoclaves that cover a wide range of applications for laboratories in hospitals, clinics, research institutes, universities, pharmaceutical, food, medical and biotechnological industries.

The flexibility of design enables these autoclaves to be built to suit a wide variety of specifications and requirements from users who demand the best solution to meet their needs. A number of options provide the user with the choice of chamber size, door configurations, vacuum systems, steam generation, sterilizing cycles, recording systems, loading equipment and accessories.

## INDUSTRIES:

### MEDICAL

Sterilizer  
Technologies cc



# INCINERATORS

The management of waste is becoming ever more important with the focus on health and our environment. In Namibia, incineration is the chosen process.

CTS can assist with your incineration needs, providing incinerators that can destroy hazardous, medical, domestic and animal waste. Our incinerators range from a small load capacity to over 200kg/hour, and are either gas or diesel fired. Not only can CTS provide the incinerator, but also installation virtually at any site within Namibia as well as routine servicing.

An alternative to incineration is waste conversion, which involves the shredding and sterilization system from Ecodas (France). Any form of waste is shredded beyond recognition and then sterilized under pressure with steam. This process destroys all bacteria and renders the waste safe to be disposed on any municipal dumping site.

## INDUSTRIES:

**MEDICAL**  
**VETERINARY**



# SIGNALLING

**klaxon**

**SOLE  
DISTRIBUTOR**

Sounding and signal systems are an important factor in today's industry and form an integral part of any safety program. We offer only high quality sounding and signalling solutions from the world's best, Klaxon.

Our solutions cover a wide voltage and power (a few watts to a couple of kW) range as well as intensity level (dB) to cover the distance (from a few meters to 15km) you require.

For offshore or onshore solutions, for mines or for industrial parks and factories, we are able to offer a solution that fits your needs perfectly.

## INDUSTRIES:

**MINING**





Many techniques have been developed for the measurement of pressure. Central Technical Supplies together with Ashcroft pressure gauges, can supply a wide variety of gauges, made with the highest standards for performance and quality, to meet your application. Ashcroft developed a dry gauge that has a better performance than a liquid filled gauge and can thus be used in severe vibration and pulsation applications. We do keep stock of the most commonly used gauges in various sizes and pressure ranges.

#### TYPICAL APPLICATIONS ARE:

- Temperature indication
- Pressure indication
- Gauges with chemical seals

#### INDUSTRIES:

**WATER AND WASTE WATER**  
**MINING**  
**FOOD AND BEVERAGE**



# TEMPERATURE MONITORING



In the food and beverage industry “supply chain” temperature monitoring is of crucial importance. Testo offers a complete solution to monitor all your cold rooms, trucks on the road or spot checks. All on one central system which is highly customizable for any requirements.

Various sensor and sensor interfaces are available to monitor you entire process from start to customer.

## FIELDS OF APPLICATION:

- Food production, distribution and inspection
- Heating and ventilation
- Refrigeration

## OTHER TESTO PRODUCTS:

- Flue gas analysis
- Endoscopy

## SOME OF OUR PROJECTS:

**Central Veterinary Lab – Windhoek:** Installation of a Saveris monitoring system for incubators, autoclaves, fridges and freezers. Temperature as well as humidity is recorded.

**Analytical Laboratory Services:** Installation of Saveris monitoring system for incubators.



# OIL FILTRATION SYSTEMS



**OFFICIAL  
DISTRIBUTOR**

Maintenance costs play an important part in keeping a business successful and profitable. With the solution from Alfa Laval to reduce maintenance costs on machinery that require regular lube oil and oil filter changes the MOATTI Filter is the answer. With this solution service life of lube oils can be extended dramatically as well as the regular oil filter replacement is reduced, saving, you, the client hard cash.

Other oil filtration modules for transformer or turbine oil filtration are also available.

## **INDUSTRIES:**

**MINING  
POWER GENERATION  
MARINE**



# PUMPS



**SOLE  
DISTRIBUTOR**

CTS has partnered with Calpeda, high quality pumps from Italy. From hot water circulation pumps, booster pumps, centrifugal pumps and submersible pumps, we can supply a pump for your pumping requirement.



# VARIABLE SPEED DRIVES AND SOFT STARTERS



CTS supplies variable speed drives and soft starters from a few hundred watts to 1.2MW. Danfoss is known to manufacture the world's most efficient speed drives, if it comes to high power, efficiency counts and saves you money. Voltage ranges from 220V single phase to 690V 3 phase are available.

## APPLICATIONS:

- Pumping (water and waste water)
- Position control
- Automation

## SOME OF OUR PROJECTS:

### Namwater:

Supply 10x 1.2mW 690V speed-drives for the upgrade of the Okahandja-Windhoek pipeline.

## INDUSTRIES:

**WATER AND WASTE WATER**  
**MINING**  
**FOOD AND BEVERAGE**



# POWER FACTOR CORRECTION



**OFFICIAL  
DISTRIBUTOR**

With Elspec's Equalizer and Activar system, fast and reliable power factor correction is finally available on the Namibian market. With reaction times of 2/3 of a cycle, power factor correction virtually happens in real time, reducing your monthly electrical bill considerably.

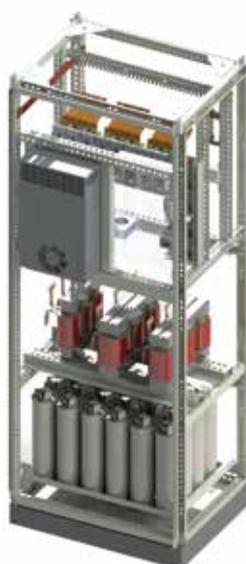
The Activar is generally used for relatively stable loads such as hospitals, buildings, etc.

The Equalizer is installed at plant where continuous load changes do occur such as harbour cranes, motor start-ups, etc.

With easily extendable configuration, the power factor correction units can be installed from a few kVA to many MVA, upgraded at any point in time without the need to replace existing hardware. Compensation are merely added to the already existing system.

## INDUSTRIES:

**ALL MAXIMUM DEMAND METERING CONSUMERS**



# POWER QUALITY ANALYSERS



**OFFICIAL  
DISTRIBUTOR**

The world's most accurate power analyser to even detect the smallest of glitches in your electrical network. With up to 1024 samples/cycle (competition only 64 samples/cycle) on 16 ADC channels, the Elspec power analyser is superior to any other power analyser on the market, logging all important parameters at the same time as well as able to store all captured data for more than 1 year. No configuration is required to select what parameters to monitor, the power analysers logs and stores all....

Portable or fixed units are available for continuous network monitoring. With state of the art data compression techniques, data transmission costs are kept to an absolute minimum.

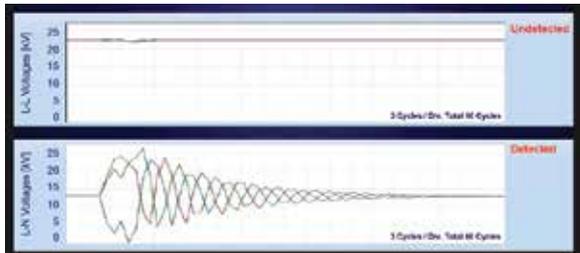
With time synchronisation features, faults can be analysed across the entire network with ease, even if analyser are installed hundreds of kilometres apart.

With easy interface to most SCADA systems, integration into existing network management tools is as easy as 1, 2, 3.

## INDUSTRIES:

**POWER UTILITIES**

**LARGE ENERGY CONSUMERS**



# SOLAR POWER

Electricity is an essential part of modern life, without it the world virtually comes to a standstill. With our tailor made solutions that meet costome requirements, we can guarantee a clean uninterrupted power source to the client, freeing him from price inflation and power outages.

Unique solutions are our speciality, be it off-grid or grid tied systems.

## SOME OF OUR PROJECTS:

Pioneerspark Medical Centre      Off grid electrification of schools in the Kuenene region

Stier Vente Chartered Accountants      Off grid electrification of schools in the Otjozondjupa region



# FAULT LOCATORS

# Megger

**SOLE  
DISTRIBUTOR**

Available on the  
App Store

ANDROID APP ON  
Google play

High voltage measurement and fault location is not complete if it is not done with a MEGGER product, be it earthing tests, fault locators, battery testers, insulation testers and many more. MEGGER has got a solution for:

- Power testing
- Telecom and Datacom
- Industrial testing
- Building wiring

Speak to us for more information.

## INDUSTRIES:

**SERVICE PROVIDER  
POWER GENERATION  
TELECOMMUNICATION**



# sebaKMT

A member of Megger Group



# TEST & MEASUREMENT

## FLUKE®



Test and measurement equipment is nowadays a crucial tool in every industry. With a wide range of quality products CTS can meet all your test and measurement requirements with tools such as:

- Digital multimeters
  - Clamp meters
  - Power analysers
  - Thermal imagers
  - Scope meters
- and many more

### INDUSTRIES:

**MINING**  
**FOOD AND BEVERAGE**  
**SERVICE PROVIDER**  
**ENGINEERING**



## FLUKE networks®



For network testing and analysis, CTS has partnered with Fluke Networks to be able to supply the Namibian communication sector with state of the art test equipment for:

- Optical fibre testing
- Copper cable testing
- ODTR and DTR test equipment
- Traffic testing
- Network cable testing
- Cable qualification testing

to name but a few





Technologies have become an essential part of modern life, be it in the industry, at home and now even in your field on the farm. With a continues increase in competitiveness, the farmer continuously needs to analyse and adopt his operation to cut costs, optimize processes as well as increase yield output, this is known as precision farming.

Precision framing is based on the summary of technologies to enable the farmer to make site specific crop management decision. By collecting data in near real time from the field, the management of irrigation cycles, fertilizers and pesticides can be optimized while at the same time saving direct costs and maximizing returns.

We do supply high quality ADCON stations which are highly configurable.

Some measured parameters:

- Ambient temperature
- Humidity
- Wind speed and direction
- Soil Moisture
- Soil Salinity and conductivity
- Precipitation
- Irradiance

To name a few.

### TYPICAL APPLICATIONS ARE:

Soil moisture monitoring, disease forecasting, evapotranspiration calculation, frost warning, and irrigation management.



# PROFESSIONAL WEATHER STATIONS

We are able to supply, install and service automatic weather stations (AWS) countrywide. With our own tower design a standard AWS (according to WMO standards) can be installed in a matter of hours by just two people.

Humidity and ambient temperature monitoring, rain monitoring, barometric pressure, ground temperature, irradiance, evaporation, cloud height as well as visibility are just a few of the sensors that we can supply.

WE OFFER PRODUCTS FROM THE FOLLOWING MANUFACTURERS:

## VAISALA

(Namibian Representative with limited calibration service for sensors)

**SOLE  
DISTRIBUTOR**



**SOLE  
DISTRIBUTOR**



# PROJECTS WE ARE PROUD OF

PROJECTS



FIND MORE PROJECTS ON [WWW.CTSNAM.COM](http://WWW.CTSNAM.COM)

## SMALL OFF-GRID PV SYSTEMS (2018)



Various small off-grid PV systems, also referred to SHS (Solar Home Systems) have been supplied country wide. These systems are typically based on small high efficiency lithium ion batteries as storage solution and Victron components such as solar charge regulator, inverter and monitoring devices.



## HANNS SEIDEL FOUNDATION (2018)

CTS has electrified two schools in remote northern Namibia funded by the Hanns Seidel foundation with the aim to provide electricity for lighting, thus extending learning hours for learners well into the night. Both systems are based on BlueNova 4kWh lithium ion batteries, Victron Energy charge regulators and inverter technology. Remote monitoring is possible via the integrated Colour Control GX from Victron. Special attention has been given to the system configuration to prevent total battery shutdown. This is achieved by switching the inverter off at a predefined battery state of charge (typically 20%) and only reactivate the inverter once the batteries are charged beyond a predetermined threshold.

The systems were officially inaugurated by the Ambassador of Germany in June 2018.



## A LA MER LAUNDRY (2017)

When A La Mer Hotel in Swakopmund decided to expand, they approached CTS with a unique challenge: to create a functional laundry that was both energy and water efficient, and would also fit into a small space, while being whisper quiet, so as not to disturb any guests. In addition, the laundry has to perform excellently, producing quality wash, tumbling and ironing results. Only one brand came to mind: Miele.

Miele recently launched new bench mark machines, which have short programme cycles, excellent spin performance, a redesigned patented honeycomb drum and have low consumption values. A La Mer Hotel was the first in Namibia to purchase these new machines.

CTS installed washer extractors with water recovery units, as well as automatic dosing systems, to ensure the best quality wash, every time. The tumble drier has an air recycling system, saving up to 60% of energy. And with a matching drying ironer, optimum finishing results are achieved. Small accessories made this laundry a complete turn key solution.



## STRAND HOTEL LAUNDRY (2017)

O&L Leisure is well known for their high-quality lodges and hotels. Guests all over the world expect the best standards, which start with flawless bed and table linen and towelling with a soft handle. Carefully selected and exquisitely finished laundry is good advertising for hotel standards. And, at the same time, laundry care is a significant investment. It is therefore all the more important that hotel laundry is long-lasting and durable, underlining care and attention to perfection.

CTS designed and installed the full turn key solution for Strand Hotel, which included Miele washers, tumblers and drying ironers, as well as various accessories, including a form finisher. Miele professional machines are custom-made to meet the individual needs, and they offer the perfect solution with optimum economy.

Strand Hotel can now pride themselves with a state of the art laundry. CTS, a complete service from just one source.



## **PALMWAG LODGE LAUNDRY (2017)**

This paradise in the Damaraland is a popular tourist destination. Being located in a remote area, they demanded reliable machines, with the highest quality, that are also versatile. Miele machines are able to tackle everyday laundry problems – safely, conveniently and economically.

With the many years of experience, CTS provided Palmwag Lodge with a complete solution. We know that reliability is a key requirement, to ensure trouble free working, while maintaining the highest of standards. CTS, the ideal solution to any situation.

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## **PIONEERSPARK MEDICAL CENTRE (2017)**

Pioneerspark Medical Centre can call themselves a proud owner of a 38kW photovoltaic grid feed system. Considerable savings on the monthly electricity bill are achieved as most of the electricity requirements are produced directly at the customer. Excess energy is fed back into the grid and credited on the monthly electricity bill by City of Windhoek.

The system consists of 144 265W PV modules mounted flat on the roof of the building with 2 Fronius three phase grid feed inverters and remote monitoring via the Fronius App on the cell phone. Remote monitoring allows CTS to advise the client on possible faults and recommended actions to be taken.



## STIER VENTE CHARTERED ACCOUNTANT (2017)

In early 2017 Stier Vente Chartered Accountant did take the decision to move to renewable energy. A 17kW grid feed system was installed on the roof of the office building to reduce the monthly electricity bill.

A total of 67 260W PV modules and a SMA SunnyTripower 17kW inverter was installed. Remote monitoring allows CTS to advise the client on possible faults and recommended actions to be taken.



## INSTALLATION OF 26 AUTOCLAVES COUNTRY WIDE FOR MINISTRY OF HEALTH AND SOCIAL SERVICES (2016)

CTS was awarded four tenders in 2015, to supply, deliver to site, install, test and commission of autoclaves throughout Namibia.

In addition to the 160L Steri-Tech autoclaves, water softeners were installed to increase the life span of each unit and reduce overall maintenance cost.

A number of installation teams worked hard to complete the project within the stringent timeframe set by the client. Each site came with its own challenges such as:

- 1) Removing of existing units that were beyond repair
- 2) Low supply water pressure
- 3) Space limitations where the new units were to be installed
- 4) Breaking out of walls to fit new autoclaves



## SERVICE OF ORANJEMUND AVIATION WEATHER OBSERVATION SYSTEM (2017-2019)

CTS will calibrate and verify proper operation of the AviMet AWOS system on a 6 monthly interval. This guarantees proper system operation and detection of any looming system failures where components need to be replaced due to the harsh weather conditions.

Our technicians received factory training at Vaisala in Finland on the installed system and are highly qualified and capable to quickly diagnose any faults on the system. With remote login features from Windhoek, faults can be easily identified and rectified, together with assistance from a partner in Oranjemund.



## REFURBISHMENT OF THE VAN-ECK TRANSFORMER OIL STORAGE FACILITY (2015/2016)

CTS was successful in winning the tender for the refurbishment of the transformer oil storage plant at the van Eck Power station. The project included the following:

- 1) cleaning and painting of all oil tanks
- 2) automating the entire plant
- 3) installation of oil filtration system

Old as well as new transformer oil is stored in different tanks. Color codes on the tank clearly indicate what type of oil is stored in each tank. Humidity as well as other dirt particles are removed by means of the Alfa Laval Oil Filtration plant. The process is fully automated and PLC controlled.

Radar level sensors are installed in each tank to monitor quantity on hand. Maintenance free breathers on each tank prevent access of water moisture into the tank and the build up of dangerous gases.

A Coriolis custody transfer meter accurately indicates the quantity of old oil that is transferred to third party tankers for selling purposes.

### BEFORE



### AFTER



## SUPPLY, DELIVERY AND INSTALLATION OF LAUNDRY EQUIPMENT FOR LADY POHAMBAMBA PRIVATE HOSPITAL (2015)

CTS was instructed to supply, deliver, install, test and commission laundry equipment for Lady Pohamba Private Hospital in 2015.

With Miele's patented stainless steel Honeycomb Drum, the specially designed drum ribs allow the water to saturate the laundry very quickly, reducing washing times. The high spin speeds with a G-factor of up to 500 make for optimum water extraction. There are also connections for detergent dispensers, ensuring that the same amount of detergent is used for each wash. A water recovery unit saves up to 30% of the water consumption. The tumble dryers are equipped with a heat-pump system, with results in a reduction of 60% of energy consumption.

Thanks to the residual moisture level of approximately 50% achieved by Miele's washer-extractors, bed linen does not need to be dried any further before it is fed into a rotary ironer with a high heat output. Miele's technology guarantees economy and quality, and actively contribute towards protecting our health and environment.



## ORANJEMUND AIRPORT - AVIATION WEATHER SYSTEM (2015)

DeBeers Namibia published a tender for the supply and installation of a weather monitoring system at the Oranjemund Airport. CTS was awarded the tender based on price, knowledge of the meteorological measuring equipment as well as quality of products. At time of installation the station was the most advanced aviation weather station in Namibia.

Technical Details of the system installed:

- 1) Ceilometer at end of runway 20 to measure cloud height at three levels up to 7,500m.
- 2) Runway Visibility and Present Weather sensor at stop end of runway 20.
  - a) Present weather sensor monitors 7 different types of precipitation.
  - b) Visibility sensor takes background luminescence into account.
- 3) Wind speed and direction a touchdown runway 20.
- 4) Wind speed and direction, rain as well as barometric pressure at stop end runway 20.
- 5) AviMet server for processing of all data.
- 6) 3 workstations spread along the buildings for weather monitoring and supervision purposes
- 7) ATIS voice system transmitting on aviation frequency as well as telephone dial in the current weather conditions.

All communication between the equipment and the AviMet server is based on wireless transmission to reduce cabling costs.

The weather information can be picked up roughly 100 NM away from the airport by all approaching aircraft.



## INSTALLATION OF OFF-GRID PV SYSTEMS IN THE OTJOZONDJUPA REGION (2015)

Three localities in the Otjozondjupa region were successfully electrified by means of Off-Grid PV containers. The system sizes varied from 6kW, 12kW to 25kW of PV power. PV modules were installed on roofs of nearby houses, batteries, inverter/charger and switchgear are located in our proven design of prefabricated containers to keep the components cool, even in the hottest of climates.




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## HYBRID PHOTOVOLTAIC SYSTEM FOR ELAVI CLINIC (2015)

The installed photovoltaic system at Elavi Clinic caters for the power supply to the clinic as well as the nurse houses. A 6.2kW PV module array generates enough power for the daily energy requirements. Should this not be sufficient the batteries can be charged by a backup generator.

The system consists of the following:

- 1) 6.24 kW PV array
- 2) 2x Victron BlueSolar 150V/70A MPPT regulator
- 3) 600Ah Battery capacity
- 4) Inverter/Charger, Victron Multi, 48V/8000VA
- 5) System Monitoring (BMV700, Color Controll GX)



## SUPPLY, DELIVERY AND INSTALLATION OF LAUNDRY EQUIPMENT FOR THE HUSAB MINE (2015)

CTS was instructed to supply, deliver, install, test and commission laundry equipment for the Mine Complex Change House, Plant Complex Change House and the FPR Change House at the Husab Mine in 2015.

The Husab mine has to process nearly 2 000 overalls and towels on a daily basis. Emphasis was made on equipment that is energy efficient, safe to operate and cost effective to maintain.

Miele equipment fulfils every requirement when it comes to the economical processing of large amounts of laundry. Miele's tried and tested programmes ensure the correct washing process for every type of material. The tumble driers complement the washer extractors and are highly economical, thanks to short running times. Thus you have a perfect solution to process large amounts of laundry, fast, hygienically and economically.

CTS installed washer extractors fitted with water recovery units and heat pump tumble driers. Laundry-care requirements vary significantly according to the customer's needs. Whichever your requirement, CTS can offer you the ideal solution.

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## VARIOUS INCINERATOR INSTALLATIONS (2015)

Over the years CTS became known to various government ministries as an expert in the supply, installation and service of incinerators across entire Namibia. With our in-house designed control panel, operation of the incinerators becomes child play. Various safety features prevent unwanted damage to equipment as well as a guaranteed complete incineration process.

We supply and install incinerators from small to large, with capacities from a few kg per hour to many hundreds of kg per hour.




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## LAUNDRY (2015)

The core business of CTS is still the installation of industrial laundry solutions. With many sites all over the country and continuously increasing some of our mile stone projects include:

- Oshakati Hospital Laundry
- Katima Mulilo Hospital Laundry
- Various Lodges and Guesthouses country wide

All our laundry projects include supply, installation and service, from single machine laundries to laundries with capacities of many hundreds of kg per day.



## PART REFURBISHMENT OF RUNDU STATE HOSPITAL LAUNDRY (AUGUST 2014)

CTS removed old and obsolete laundry equipment and installed new machines.

The installed equipment consisted of:

- 2 x new Primus FS40 high speed washer extractors
- 2 x Maytag energy saving tumble dryers
- 1 x Miele through-feed drying ironers
- including laundry trolleys, ironing trolleys and other small accessories



## OFF-GRID ELECTRIFICATION OF GOVERNMENT BUILDINGS IN THE KUNENE REGION (2013-2014)

This government appointed job consisted of installing off-grid containerized photovoltaic systems in the Kunene Region.

The systems were installed in small rural schools.

The project included the wiring of government buildings as well as the manufacture and install of containerized PV systems. Containers were custom manufactured by Namspace according to CTS requirements. Each container consisted of the following:

- ~3kW PV power
- 2x 70x MPPT charger
- 1x 5kVA inverter/charger
- 4,500 Ah battery bank
- Remote monitoring via GSM and V-Sat



# PROJECTS

## INSTALLATION OF 10 AUTOMATIC WEATHER STATIONS IN BOTSWANA (2014)

In 2013 CTS was approached by the University of Hamburg as well as Botswana Metrological Services with a request to install 10 automatic weather stations across Botswana. These stations meet WMO standards and measure:

- Humidity
- Ambient temperature
- Ground temperature
- Wind speed
- Wind direction
- Barometric pressure
- Solar irradiance
- Rain
- Leaf wetness



## CONTAINERIZED OFF GRID ELECTRIFICATION OF GOVERNMENT BUILDINGS IN THE OMUSATI REGION (2013)

CTS was awarded the tender for the electrification of 9 sites in the Omusati region with containerized solar solutions in 2013. It consisted of the supply, installation and commissioning of containerized solar solution with installed PV capacity of ~2.8kW and a battery storage capacity of 3,000 – 4,500 Ah depending on locality. All systems are remotely monitored via Victron remote monitoring.



## HOCHLAND SPAR HOIST (2013)

CTS was requested to refurbish the hoist at Hochland Spar as continuous breakdowns of the current system rendered the lift in such a state that it became a safety risk to personnel on site.

New guide rails for the lift were installed to ensure proper guiding of the lift within the shaft. A fully automatic control system with various safety features and door lock mechanisms was designed, assembled and installed. In case of power failures an integrated 24V UPS system prevents that doors to the lift are opened.

The control unit is based on the ILC131 PLC from Phoenix Contact with various I/O extension cards.

## INSTALLATION OF NEW STEAM BOILER AT HARTLIEF WINDHOEK (2012)

A 1.5t boiler was installed at the Hartlief factory to cater for the growing needs of steam. The project included:

- Installation of new steam boiler next to the existing boiler
- Modifications to HFO line to cater for new boiler
- Commissioning

Over the past years minor refurbishment, maintenance and upgrading projects were carried out such as:

- Installation of condensate pumps to reduce backpressure of equipment inside the factory
- Raising current condensate storage tanks to increase head pressure for feed water pumps
- 3 monthly service of both steam boiler and yearly inspection with Ministry of Labour inspectors



## FARMERS MEAT MARKET MARIENTAL – SOLAR WATER HEATING PLANT (2012)

Farmers Meat Market Mariental approached CTS for a quotation and subsequent installation of a solar water heating plant for their existing diesel fired heating system. The aim was to increase the water temperature of the feedwater and thus reduce the monthly diesel consumption of the entire plant. Savings of up to 6,000L of diesel per month were achieved.

The plant consists of:

- 120x 2.5sqm flat plate collectors
- 1x 20,000L s/s hot water buffer tank
- 4x pump sets consisting of 2 pumps each
- 2x control panels for pump control, tank level control as well as temperature monitoring

For added energy gain the plant is also connected via a heat exchanger to the discharge side of the ammonia refrigeration plant.



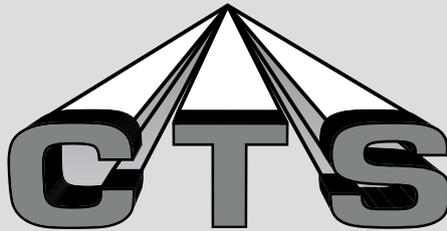
## HILTON HOTEL WINDHOEK – HOT WATER SYSTEM (2010 - 2011)

During 2010 CTS won the tender for the installation of a gas heated hot water system at the Hilton Hotel Windhoek. This consisted of the supply and installation of:

- 2x 350kW gas fired hot water boilers
- 2x 7,000L Calorifier (hot water tanks) installed in the basement and 9th floor of the hotel
- 4x hot water circulation pumps
- 2x glycol circulation pumps which are speed controlled

The entire installation was carried out by CTS staff in record time.





## Central Technical Supplies (Pty) Ltd.

### AUTHORISED RESELLER

To become a CTS authorized reseller on any of our product for which CTS has sole distributorship, please do contact [reseller@ctsnam.com](mailto:reseller@ctsnam.com)

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Some of our suppliers do have Apps for smart phone available either through “Google Play” store, “iStore” or the respective supplier website. CTS cannot be held responsible for the content of these Apps.



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