



**WELCOME TO**

**ALFA ENGINEERING SOLUTIONS**

*New Solutions Possible Through Technology*



# Industries we Serve

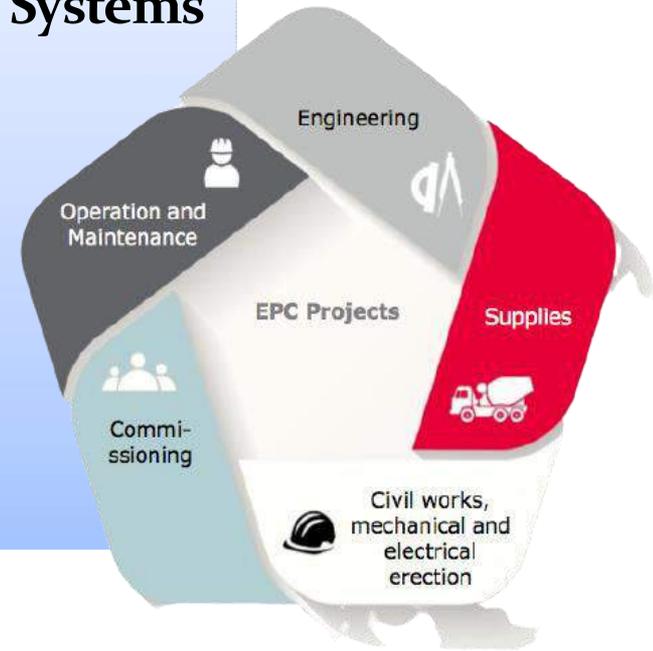
→ POWER  
→ OIL & GAS  
→ PETROCHEMICALS  
→ EPC CONSTRUCTION  
→ FOOD & BEVERAGES

→ FERTILIZERS  
→ CHEMICALS  
→ PHARMA  
→ BIOTECH  
→ WATER & WASTEWATER



# Our Expertise

- ❑ Supply of Industrial Products, Plant Utilities, Systems & Spares
- ❑ Water & Wastewater ,STP & ETP PLANTS
- ❑ Online Pollution Monitoring Systems/CEMS
- ❑ Laboratory Equipments – (Civil, Mechanical, Educational & Scientific Lab Equipments)
- ❑ Food Waste Compost Machine



A background image of an industrial facility, possibly a power plant or refinery, with various structures, pipes, and a tall chimney stack under a clear blue sky.

# EPC LSTK PROJECTS FOR ELECTRICAL & INSTRUMENTATION

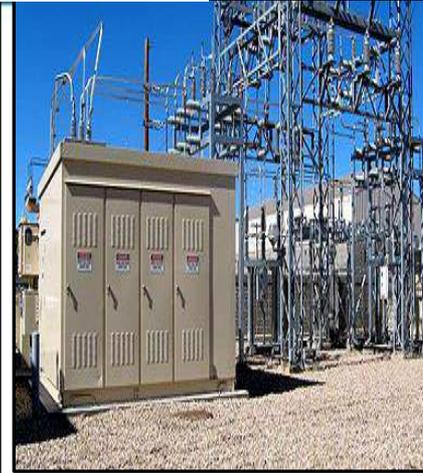
We offer Electrical & Instrumentation Design & Engineering Consultancy Services in the area of EHV/HV/Sub Stations, transmission lines, distribution lines.

- ❑ **Pre-basic Design Engineering Services:** - Detailed plant sitting report, process designing, data collection & analysis, feasibility and financial engineering.
- ❑ **Basic Design Engineering:** - Preparation of preliminary layouts, basic electrical load calculations, estimation of power requirements, completes designing and overall cost estimation is worked out.
- ❑ **Detail, Engineering Drawing & Documentation:** - We prepare detailed specifications & datasheets, various layouts like conduiting, trays, raceways, power points, electrical SLD, Panel GA drawings, earthing layouts, master plan, also sizing & selection of equipment's cables, transformers, switchgears etc. Designing of control system drawing, schemes and logics is also carried.
- ❑ **Project Management :** - We assist in preparation of project schedules, assigning the supervisory staff, fixing of deadlines, reporting requirements, quality checks and testing, time management, training etc.

# Electrical EPC, Turnkey Projects, Products

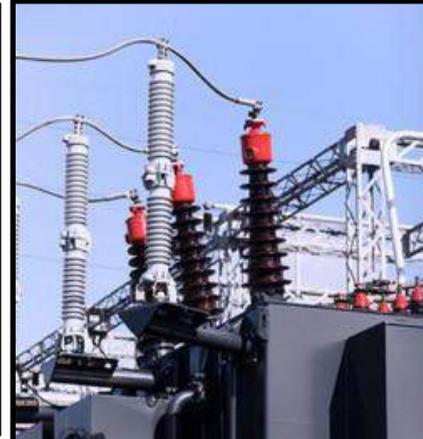
## ELECTRICAL INSTALLATIONS:- Industrial Electrification

- New Electrical Installations Indoor and Outdoor for Projects
- HT/LT Electrical Installations for all types of Industries
- Power and Lighting Solutions for various Industries
- Fire Alarm & Emergency lighting
- Voice & data installations
- Design & build service including CAD drawings.
- Inspection & testing, Lighting Automation
- Heating and Lighting Solutions



## ELECTRICAL INSTALLATIONS:- Commercial Establishments

- New Electrical Installations
- Power and Lighting Solutions
- Work Station Electrical and data/ Voice.
- Office Interior Electrical and data/ voice Work.
- Lighting Automation
- Building Management Electrical and data/ Voice.
- Inspection and testing.

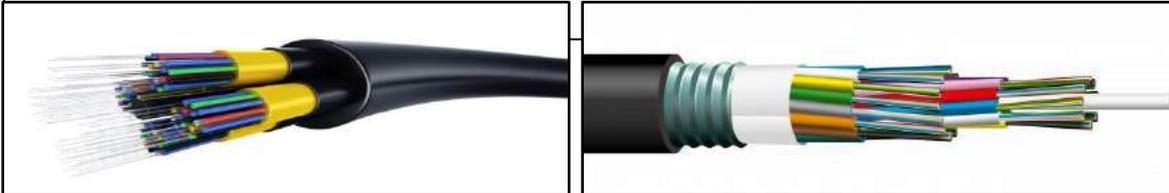
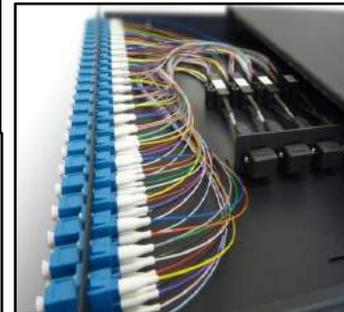


# Electrical EPC, Turnkey Projects, Products

- 34.5 KV and 13.8 KV Distribution systems & Overhead Lines
- Street & Area Lighting, Building Management Systems
- Grounding and Lightning Systems.
- Low Current System (Fire Alarm Systems, CCTV Etc.
- Fiber Optic Cables Installation, Testing, Splicing & termination.
- M.V protection relays circuit Breakers, CT's and VT's.

## MANUFACTURERS OF ELECTRICAL CONTROL PANELS.

- Power Control Centre, Motor Control Centre
- Process control panel, Auto Mains Failure Panel
- Automatic Power Factor Control Panels
- Power and Lighting Distribution Boards.
- FD Panels, PLC Control panels, Bus Ducts and trunkings



# Process Control Instrumentation

Temperature and pressure Gauge

Control Valves

Level Gauges & Sensors

Flow Meters

Transmitters Thermocouples

Instrumentation communication Cables

Thermowells

Calibrators & Recorders

Solenoid Valves. Actuators

PLC & DCS

Digital Indicators & Controllers

Gas Detectors

Automated Valves



# INSTRUMENTATION PROJECTS, SUPPLY & SERVICES

We provide Instrumentation Services like Supply, Installation, Testing & Commissioning Services in various industries for following items:-

- ❑ Supply, Installation, Testing & Commissioning of systems including control systems, SCADA systems, DCS and PLC systems, fire and gas systems and process installation, termination & commissioning of indicators, transmitters and controllers, valves & other field instruments, Pressure Transmitter, Pneumatic Control System.
- ❑ Infrastructure systems installation including cabling, instrument air / gas tubing and impulse piping work.
- ❑ Testing, calibration & loop checking through fully trained technicians.
- ❑ Supply of Instruments, Panels, junction Boxes and related Material.



# Mechanical Products

<b>Pipes &amp; Tubes</b>	<b>Valves</b>
<b>Pipe Fittings</b>	<b>Filters</b>
<b>Pipe Hangers</b>	<b>Strainers</b>
<b>Struts &amp; Fittings</b>	<b>Bearings</b>
<b>Flanges ASME / ANSI</b>	<b>Pumps</b>
<b>Stud Bolts &amp; Sealings</b>	<b>HVAC Spares</b>
<b>Gaskets</b>	<b>Fasteners</b>



# PMI / XRF Metal Analyzers

**OLYMPUS**

**VANTA Handheld XRF PMI analyzers** provide non-destructive alloy analysis to rapidly and accurately identify alloy grades and measure metal composition. Perform PMI inspections and QA / QC testing in seconds, from simple grade ID to specification quality control, from incoming material inspection to end-product verification.

Superior features of Vanta Series include:

Military standard 810 –G-4 foot ( 1.3 M ) drop test  
IP 54 rated dust and water resistance.

It incorporates Olympus' new **Axon™ technology**,  
Optional Wi-Fi and Bluetooth® for real-time data sharing  
Expandable Memory for more data storage.

Alloy library including 450+ grade specifications

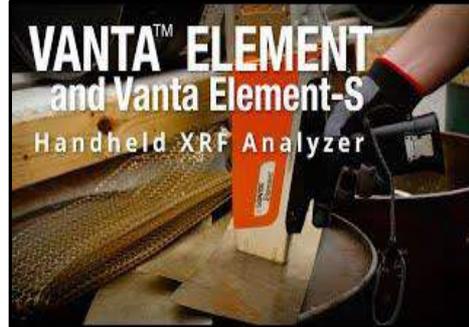
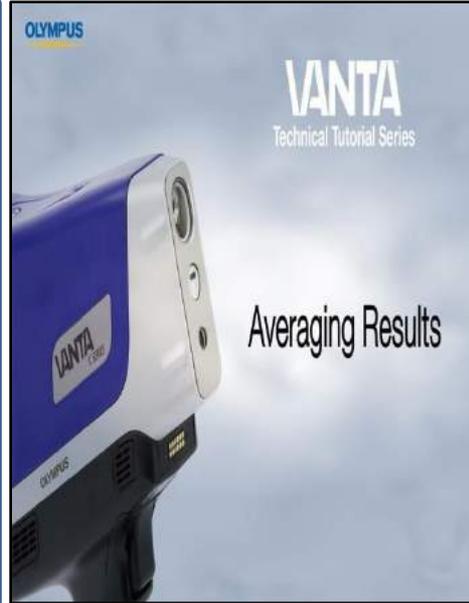
Vanta Mobile App

## Vanta Series Handheld XRF Analyzer

Handheld analyzer featuring:  
Including tungsten (W) anode 2W /35 kV X-ray tube and PIN detector.

Primary Method: Alloy Calibration for Vanta Element=tungsten anode analyzers. Analysis for metal samples measuring Ti, V, Cr, Mn, Fe, Co, Ni, Cu, Zn, Au, W, Hf, Ta, Re, Pb, Bi, Zr, Nb, Mo, Pd, Ag, Cd, Sn, Sb. Also includes the Vanta Element Precious Metals method.

Accessories include sealed rugged carrying case, 1 Li-Ion battery, USB storage with PC Software, 3 spare analysis windows and power supply with power cord. IP54: dust protected and protected against water splashing from all directions



Product	Standard Accessories and Features
<p><b>Niton® XL2 100G Alloy Analyzer</b></p>  <p><b>Excitation Configuration</b></p> <p>Miniaturized 38kV/80uA Ag Anode X-Ray Tube</p>	<ul style="list-style-type: none"> <li>➤ One rechargeable 6-cell battery packs</li> <li>➤ Battery charger; AC power supply</li> <li>➤ Carrying case</li> <li>➤ Shielded belt holster</li> <li>➤ SpectraView element scanner</li> <li>➤ Integrated Angled touch screen with large intuitive color icons</li> <li>➤ “Virtual” keyboard for data entry</li> <li>➤ Password-protected set-up and operation with several other radiation safety features</li> <li>➤ NDT© software suite for easy data downloading and viewing, remote control and grade library modification</li> <li>➤ PC connection cable</li> <li>➤ Certified reference material</li> <li>➤ Bluetooth Wireless Connectivity</li> <li>➤ 12-month limited warranty on parts, labor and accessories</li> </ul>

Deposit Type	Geochemical Signature
Orogenic Au	S, As, CO <sub>2</sub> , K+/- Sb, Te, Mo, W, Cu, Pb, Zn, Hg
High Sulphidation Epithermal	Ag, Cu, Te, Mo, Bi, Sn
Low Sulphidation Epithermal	Zn, Hg, Se, K, As, Sb, Ag/Au
Carlin-type	As, Sb, Hg, Tl
Porphyry Cu-Au	Cu, Pb, Zn, Ag
Au Skarns	Bi, Te, As, Co
Intrusive Related Au	Bi, W, As, Sb, Mo, Te
VHMS	Cu, Pb, Zn, Ag, Ba, K, Mg +/-CO <sub>2</sub>
Iron Oxide Cu-Au (U)	F, P, Co, Ni, As, Mo, Ag, Ba, U, LREE
Supergene Au	High Fineness Au +/- any of the above



Niton XLp	Niton XL2	Niton XL2 GOLDD	Niton XL3t	Niton XL3t GOLDD	Niton XL3t Ultra	Niton XL3t GOLDD+	Niton DXL	Niton FXL
SPECIALTY XRF	VALUE LEADER	PERFORMANCE LEADER	FEATURE LEADER	VALUE LEADER FOR CONSUMER GOODS	ULTRA PERFORMANCE FOR LIGHT ELEMENTS	SUPERIOR PERFORMANCE & FEATURES	ULTIMATE FEATURES FOR PRECIOUS METALS	ULTIMATE PERFORMANCE & FEATURES
								



# MECHANICAL PROJECTS, SUPPLY & SERVICES



We undertake turnkey mechanical projects on EPC basis for various segments of industries as Oil & Gas, Petroleum, Petrochemicals, Defence, Nuclear Power, Rubber Industries, Food and Pharma, Wind Energy etc.

## OUR EXPERTISE :

Process Piping Work, SS Racks, Railings, Piping Spools, Structural Fabrication.

Clean room piping work as per FDA standards

Static and rotary equipments unloading, shifting and installation.

Flue gas exhaust chimney supply and installation.

Large diameter tanks Fabrication and Installation on site.

DG Sets Installation & Commissioning work, Approvals from CCOE for the Fuel Storage Yards



# MECHANICAL PROJECTS, SUPPLY & SERVICES

## Utilities and other Fabrication Jobs :

- High pressure steam (BR) along with necessary approvals, Low pressure steam (NIBR) and condensate piping.
- Feed water, softener, water filters etc.; supply & installation.
- Thermic fluid piping, Hot water piping system, Cooling tower water piping
- Hot Insulation in Glasswool, Mineral Wool, Rockwool etc.
- Raw water piping work with Hydro pneumatic system.
- Chilled water piping work with insulation, pumps, valves etc.
- Compressed air piping work along with receivers, F.R.L, A.D.T etc.



# NDT EQUIPMENT & INSTRUMENTS



Eddy Current Testing



Magnetic Flux Leakage Testing



Phased Array Ultrasonic



Immersion Ultrasonic System



Ultrasonic Flaw Detector



Ultrasonic Thickness Gauge



Ultrasonic Accessories



MPI Accessories



Magnetic Particle Testing



Field Strength Meter



Video scope



Radiation Resistance Cameras



Liquid Penetrant Testing



Acoustic Emission



Robotic Cameras

# METROLOGY EQUIPMENT & INSTRUMENTS



Vision measuring machine



Profile Projector



Roughness Tester



Contour Tester



CMM



Metallurgical System



Micro Vicker Hardness Tester



Cutting Machine



Polishing Machine



Spectro Grinder



Mounting Press



Tensile Testing Machine



Universal Testing Machine



Salt Spray Chamber



Spectro Meter

# WATER & WASTE WATER SYSTEMS, STP, ETP, PLANTS

- Partnering with reputed manufacturers, suppliers & service Providers , we professionally perform various activities such As designing, engineering & manufacturing of equipments, Piping, and site erection & commissioning.
- Our system has been widely recognized as a reliable source For total solution for **Water Treatment** and **Effluent Treatment**.



# WATER & WASTE WATER SYSTEMS, STP, ETP, PLANTS



## Plant Setup & Maintenance support

<b>Filtration Plants</b>	<b>Softening Plants</b>
<b>Reverse Osmosis Plants, Ultra Filtration</b>	<b>Sewage Treatment Plants – MBR, MBBR</b>
<b>High Purity Water Systems</b>	<b>Effluent Treatment Plants</b>
<b>Demineralization Plants</b>	<b>Water Treatment consultation</b>



## Parts and accessories

<b>Pressure Sand Filter (PSF)</b>	<b>Magnetic Water Conditioners</b>
<b>Activated Carbon Filter (ACF)</b>	<b>Ultraviolet Systems</b>
<b>Media For PSF And ACF</b>	<b>FRP Vessels</b>
<b>SAFF &amp; Tube Settler Media</b>	<b>High Pressure Pumps</b>
<b>Bio Media</b>	<b>Multiport Vales</b>
<b>Ozonators</b>	<b>Cartridge Filter</b>
<b>Softeners</b>	<b>Water Treatment Chemicals</b>
<b>Resins for Softeners</b>	<b>Dosing Pump</b>

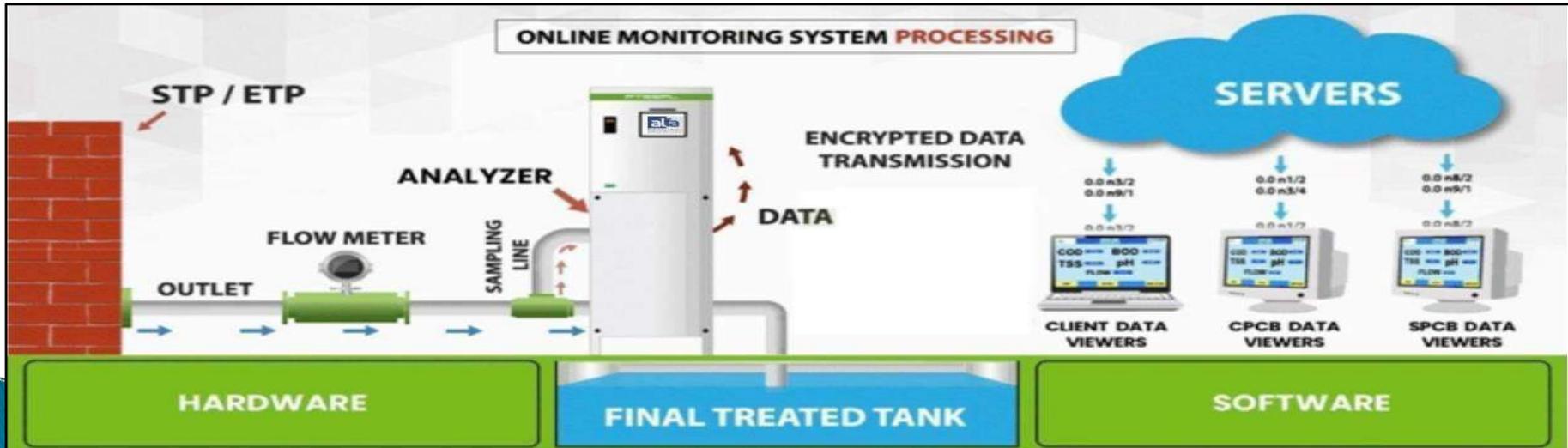




# ONLINE MONITORING SYSTEM

## For STP, ETP, Stack and Ambient Air Monitoring

A **Continuous Emission Monitoring System (CEMS)** is the total equipment necessary for the determination of a gas or particulate matter concentration or emission rate using pollutant analyzer measurements and a conversion equation, graph, or computer program to produce results in units of the applicable emission limitation or standard.

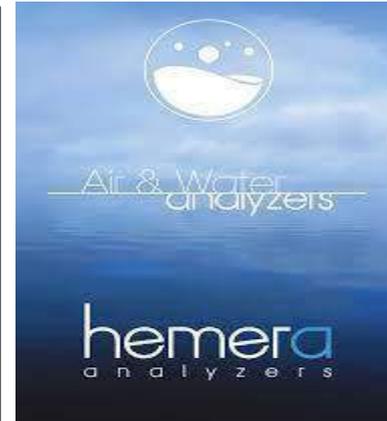




**We offer the best quality products to the world  
All the products are designed and made in France.**

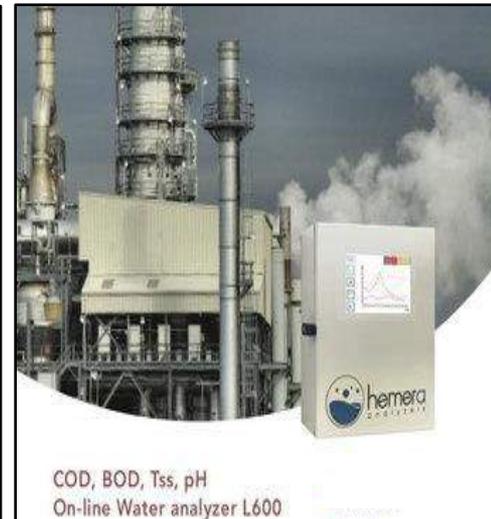
#### **ABOUT HEMERA , FRANCE:**

Hemera is a French company created in 2012 by a team of experts in the metrology field. Having expertise of design, manufacture and commercialize high-end liquid and gas online analyzers using UV spectroscopy technology. With an innovative technology developed at the company and using high-quality materials, our goal is to offer the best solution to our customers by properly understanding their needs through a good diagnosis of their requests. Also, Hamera participates in several R&D projects in order to keep being innovative and today we are present in Asia, Europe, and the Middle East through a strong network of business partners.



## Online Water/Liquid Analyzer APPLICATIONS

Waste water treatment plant--NO<sub>3</sub><sup>-</sup>, NO<sub>2</sub><sup>-</sup>, NH<sub>4</sub><sup>+</sup>, BOD, COD, pH, TSS, PO<sub>4</sub><sup>3-</sup> Colour Swimming pool-Pool water, O<sub>3</sub>, Cl<sub>2</sub>, ClO<sub>2</sub>  
Surface water-River, Lake, Rainfall water, NO<sub>3</sub><sup>-</sup>, PO<sub>4</sub><sup>3-</sup>, Hydrocarbon, COD, Salinity, DO, pH, NH<sub>4</sub><sup>+</sup>,  
Sea water -Desalination plant, Harbour  
S<sub>2</sub><sup>-</sup>, Hydrocarbon, NH<sub>4</sub><sup>+</sup>, NO<sub>2</sub><sup>-</sup>  
Drinking water- Potabilization plant  
NO<sub>3</sub><sup>-</sup>, pH, Colour, Chlorine, Turbidity



COD, BOD, Tss, pH  
On-line Water analyzer L600

**L800** Provided with an ATEX enclosure (zone I or zone II), or including 4-20mA and relay output signals, the analyzer can be easily integrated into your existing installation. With robust elements and a measurement method without chemical consumption, Hemera Analyzer it measures COD, BOD, TSS, PH and Ammonical Nitrogen

**L800** process analyzer provides fast and reliable measurements of a wide range of pollutants including Nitrogen compounds, Phosphate, Hydrogen sulphide, Hydrocarbons and Organic Matters. By using an optical method, the measurement does not require chemicals.



# ONLINE MONITORING -OTHER BRANDS

## HORIBA (JAPAN)



## OPRUSS (USA)



## TETHYS INSTRUMENTS (FRANCE)



# Alfa-Labtech

## LAB EQUIPMENT DIVISION



- Civil Engineering
- Soil & Cement Testing
- Mechanical, Structural
- Applied Mechanics
- Analytical Instruments
- Aggregate Testing Equipments
- Bitumen Testing Equipments
- Oil & Petroleum Testing Equipments
- Paint Lab Equipments
- Water & Air Testing equipments

# Civil, Concrete Testing, Survey Engineering Equipments

- Cement Autoclave
- Length Comparator
- Vicat Needle Apparatus
- Cement/ Concrete Testing Equipments
- Soil Testing Equipment/ Survey Equipment
- Blaine Air Permeability Apparatus
- Strength of Material Testing Equipment
- Bitumen- Asphalt/Oil & Petroleum Equipments



# Civil, Concrete Testing, Survey Engineering Equipments

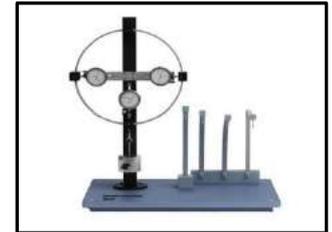
<input type="checkbox"/> Shrinkage Bar Moulds	<input type="checkbox"/> Concrete Flow Table
<input type="checkbox"/> Cement Testing Sieves	<input type="checkbox"/> Concrete Mixer
<input type="checkbox"/> Compression Testing Machine	<input type="checkbox"/> Compaction Factor Apparatus
<input type="checkbox"/> Gauging Trowel	<input type="checkbox"/> Permeability Apparatus
<input type="checkbox"/> Humidity Testing Chamber	<input type="checkbox"/> Slum Test Apparatus
<input type="checkbox"/> Muffle Furnace	<input type="checkbox"/> Concrete cube Moulds
<input type="checkbox"/> Vibrating Machine	<input type="checkbox"/> Cube Testing Machine
<input type="checkbox"/> Accelerated Cutting Tank	<input type="checkbox"/> Tile Abrasion Testing Machine
<input type="checkbox"/> Vee Bee Consistometer	<input type="checkbox"/> Vibrating Table, Hammer



# Mechanical, Structural, Applied Mechanics Engineering Equipment



- Fluid Mechanics Lab Equipment
- Hydraulic Machine Lab Equipment
- Hydraulic Bench With Accessories
- Apparatus for Verification Of Clarke's Maxwell Theorem
- Behaviour Of Column and Struts Apparatus
- Curved Beam Apparatus
- Elastically Coupled Beam Apparatus
- Elastic Properties of Deflected Beam Apparatus
- Shear Centre Apparatus
- Suspension Bridge Apparatus
- Portal Frame Apparatus



# FOOD COMPOSTING MACHINES



- Office complexes
- Hotels and Resorts
- IT Parks
- Defence Facilities
- Hospitals
- Builders
- Apartment complexes
- Municipalities
- Shopping Malls
- Industries



# What can be Composted?



## Compostable Organic Waste



**Fruit Or Fruit Peels**



**Poultry, Fish & Meat**



**Egg Shells**



**Fast Foods**



**Bakery Food**



**Meal Leftover**



**Waste Vegetables**



**Garden Waste**

## Non-Compostable Organic Waste



**Rubber, Metal & Glass**



**cigarette & Batteries**



**Big Bones**



**Plastic Bag, Cloth**



**Coconut Shell & Branches**



**Medicines Or Chemical**



**Hard & Iron Objects**



**Any Inorganic Material**

# Features and Benefits



- **Improve Soil Health.**
- **PLC with sound & HMI TouchScreen.**
- **Reduces Global Warming and Air Pollution.**
- **No Additions of Saw Dust or Any Microorganism.**
- **Composting is totally Natural and Biological Process.**
- **Odourless & Noiseless, Garbage to Garden & Improve Soil Health.**
- **90% volume reduction of food waste & 10% Compost of High quality.**
- **Converts Food Waste Fruit & Vegetable peels, Meals Leftover into Compost.**

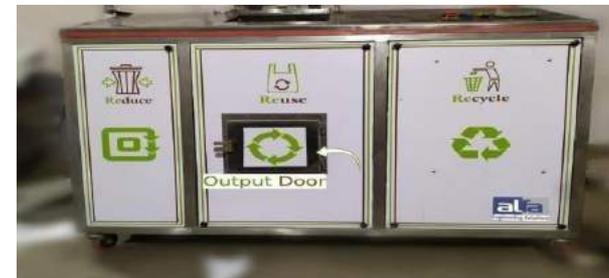


# How It Works

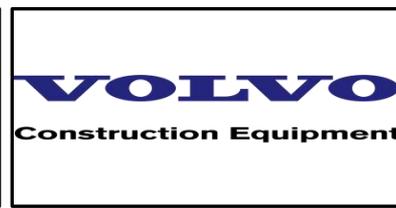
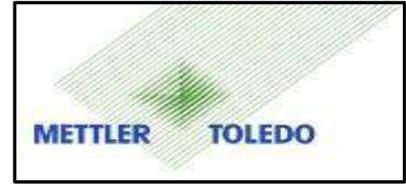


- When organic waste is added to it, moisture is sensed by the humidity sensor, due to which the heater turns ON and the composting tank gets heated. Due to this, the water content in the organic waste is evaporated and it goes out to the atmosphere as water vapour through the exhaust system. As any organic waste contains 70-80% water content, we achieve 70-80% volume reduction at this stage itself.
- At the same time, our special micro organisms then decompose the organic waste into compost, and this happens within 24 hours. That's how we achieve 85-90% volume reduction. The process is completely noiseless as there is no crushing or grinding involved.

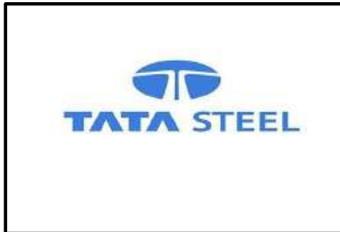
**CAPACITY – 25 Kg per day to 3 Ton per day**



# Our Few Associate Brands



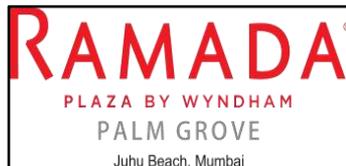
# Our Few Associates Brands



# Our Group Clients



# Our Group Clients



# Contact



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