



MTEULE

COMMERCIAL KITCHENS & WATER SOLUTIONS

ENGINEERING

COMMERCIAL KITCHENS & WATER SOLUTIONS

CATALOGUE



QUALITY
YOU TRUST



ENGINEERED
EXCELLENCE



WATER
SOLUTIONS



BUILT FOR
SUCCESS

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• INNOVATIVE | RELIABLE | SUSTAINABLE •

Water treatment equipment’s requirement.

Before any treatment of water is done, the water has to be taken to accredited laboratory for analysis.

Water sample is taken to the laboratory for two kinds of analysis.

Bacteriological analysis- This checks whether the water is contaminated with the different kinds of bacteria.

Physiochemical analysis- It checks the physical and chemical composition of water.

NB: For bacteriological analysis, sample must be analyzed within 24hrs after sampling or the sample is refrigerated before being taken to the laboratory.

Pricing

Different qualities of water require different water treatment system which is priced separately. We have indicated overall prices in this document; however, for clarification of prices and other details please contact Saset Technical Services.

TREATMENT PROCESS FOR DIFFERENT SOURCES OF WATER:

A. TAP WATER

Tap water is relatively good water. This water is mostly surface water harvested and then treated using coagulation, flocculation, filtration and finally chlorination before it is distributed to the users. With the distributions lines being buried under the ground and the type of pipe mostly being used is GI pipe, chance of the pipes rusting is high and this introduces suspended particles and bacterial contamination.

Treatment process

We propose that you use the following treatment method:

Pure Water Plants- Tap Water Purification System

These are designed for the production of totally pure water from the majority of natural or municipal sources with typical application being bottle water production. They eliminate most conditions of impurity including sediment, taste or odour and bacterial contamination.

It utilizes a six stage of treatment with no use of chemicals, simple to operate, provide consistent pure water and without any maintenance other than routine cleaning and cartridge replacement.



Output Litres per Hour	Price KSh
250 liters	150,000
500 liters	160,000
1000 liters	220,000

It has six stages of treatment:

- **1st stage** – Sand filtration- for removal of large particles.
- **2nd& 3rd stage** – Cartridge filtration- removal of suspended particles.
- **4th stage** –Carbon filtration- removal of insecticides, organic chemicals, chlorine, herbicides and unpleasant taste.

- **5th stage** – Micro filtration- further removal of suspended particles and bacterial removal.
- **6th stage** – Ultra Violet disinfection- at this stage water is exposed to ultra violet rays to kill bacteria and totally disinfect the water.

B. BOREHOLE WATER WITH MINIMUM FLUORIDE AND TOTAL DISSOLVED MATTER.

Underground water mostly contains dissolved solids. Part of these solids is fluoride which is not good for human consumption. We recommend the use of special resin namely activated alumina. Activated alumina is a special compound that adsorbs fluoride from water just the way bone and teeth adsorb fluoride in our drinking water.

Treatment process

The Activated Alumina system involves pumping the raw water with high fluoride content through a bed of Activated Alumina resin. The fluoride then becomes attached to the Alumina clearing the water off fluoride ions. Tests have shown that for the maximum absorption of Fluoride, the water passing through the bed should be controlled at a pH of 5.2.

By monitoring the fluoride level at the output you will determine when the bed is exhausted and it will then have to be regenerated by flushing out the trapped Fluoride. This process involves raising the pH level of the filter bed to 11 -12 by flushing with a 1% volume of 50% Sodium Hydroxide. This releases the Fluoride to waste after which the bed is then returned to the optimum pH of 5.2 and is ready for use.

The contact velocity should be at least 6m/hr to allow sufficient contact time between the activated alumina resin and the water. For this system, we recommend replacement of activated alumina media every 2-3years.

Mteule Reverse Osmosis System -(water treatment with less fluoride and total dissolved matter):

- Sand filtration
- Activated carbon filter
- Sediment filters
- UV disinfection Pre-treatments (i.e, chlorination/antiscalant/PH adjustment dosing)
- Reverse osmosis plant
- Micro filtration



Output Litres per Hour	Price KSh
250 liters	240,000
500 liters	340,000
750 liters	440,000
1000 liters	560,000
1250 liters	710,000
1500 liters	860,000
2000 liters	1,160,000

C. BOREHOLE WATER- WITH HIGH FLUORIDE AND TOTAL DISSOLVED MATTER

Underground water with high mineral content requires a more vigorous way of removing these minerals. By use of membrane technology, we are able to achieve removal of minerals from water up to above 96% reduction levels whilst maintaining essential minerals that is healthy for intake. One of the most common treatment processes is reverse osmosis.

Reverse Osmosis: The RO system produces purified water (permeate) from the feed water via rejection of all organic and inorganic constituents by a semi-permeable membrane system. The RO system separates the incoming feed stream into two effluent streams:

- I. **The permeate (treated water)** passes through Reverse Osmosis membranes and thus contains greatly reduced quantities of dissolved mineral salts and organics for use (typically $\geq 96\%$ rejection ratio). The designed recovery of the RO machine is 50–75 %.
- II. **The concentrate (reject water)** is the stream which passes gently across the membrane surface and thus retains the impurities separated from the permeate stream. A certain minimum flow of 'concentrate' is necessary to keep the RO membranes from 'fouling' due to the removed mineral salts and organic contents.

Treatment process

We recommend that water from the borehole to be put in a storage tank.

STEP 1: water be pumped through a filter comprising of sand media for removal of any suspended matter that will cause blockage in the RO membranes.

STEP 2: To prevent scaling of the RO membranes, it will be important to dose an anti-scalant into the water. GE Hypersperse MSI 310 antiscalant will therefore be continuously added into the pipeline prior to the RO to prevent scaling.

STEP 3: PH adjustment will be done using a chemical dosing pump complete with a chemical tank to maintain the natural taste and stability of water.

STEP 4: The "pre-treated" water will then be passed through a Reverse Osmosis Unit to reduce the TDS and condition the water. This water can then be stored in a clean water tank (client's scope).

STEP 5: The water will then be pumped through a cartridge filter and UV for sterilization before bottling is done or chlorination if the water is distributed directly to points of use.

MTEULE General purpose water plant (with high fluoride, iron and suspended solids)

Features:

- Pre-chlorination
- Flocculation
- Sand filtration
- Carbon filtration
- Birm filters
- PH adjustment
- Activated alumina

Output Litres per Hour	Price KSh
250 liters/h	310,000
500 liters/h	430,000
750 liters/h	580,000
1000 liters/h	780,000
1500 liters/h	980,000
2000 liters/h	1,100,000
3000 liters/h	1,350,000



MTEULE
COMMERCIAL KITCHENS
& WATER SOLUTIONS
— ENGINEERING —

SECONDARY FILTRATION CABINET VENDING MACHINE i.e. treated water vending unit

Features:

1. Stainless steel storage tank 250 ltrs
2. Prefilters/ sediment filters
3. Pump, piping & digital control panel
4. Has meter to keep sales record
5. Automated vending system
6. Accepts M-Pesa/coins/GSM control/digital PLC input.



No of taps Price KSh

Single tap 100,000

2 Taps 120,000

PLC OPERATED FILLING STATIONS

No of Taps Price KSh

1 tap with jet 100,000

2 taps with jet 115,000

3 taps with jet 130,000

4 taps with jet 160,000

6 taps with jet 200,000

SECONDARY FILTRATION BENCH VENDING MACHINE - for treated water

Features:

1. Attached bottle rinser (add Ksh 30,000 for every additional tap.)
2. Mobile: can easily be moved from place to place.
3. Has automatic vending system
4. Accepts M-Pesa/coins/GSM control/digital PLC input.
5. Has stainless steel storage/holding tank
6. Suitable for all types of containers
7. Made with stainless steel food grade 304



M-PESA TILL OPERATED FILLING STATIONS



ONS

MANUAL FILLING STATIONS

No of taps Price KSh

1 tap with jet 80,000

2 taps with jet 90,000

3 taps with jet 110,000

4 taps with jet 120,000

6 taps with jet 150,000

MTEULE BOTTLE RINSER JET TYPE

Features:

Machine has 2 sinks:

1. For washing outside of the bottle with raw water.
2. Pressurized jet to rinse inside the bottle with product water.

Can rinse all sizes of bottles from 500ml to 20l.



Price KSh

60,000



PACKAGING TABLES

Size in feet

Price KSh

2ftx4ft

20,000

2ftx6ft

28,000

4ftx6ft

36,000

4ftx8ft

46,000



WASHING SINKS

Size in feet

Price KSh

2ftx4ft

30,000



MIXER TANK/BLENDER

Capacity in liters

Price KSh

100lts-500lts

150,000 - 500,000

**COMMERCIAL KITCHENS
EQUIPMENT SOLUTIONS**



HOLDING TANKS

Capacity in liters

Price KSh

300

70,000

500

90,000

700

110,000

1000

130,000

COMPLETE SET UP FOR WATER TREATMENT PLANT



Mteule Pasteurizers

We make two types of pasteurizers:

1. **Batch pasteurizers**
2. **Line pasteurizers**

BATCH PASTUERIZER

Batch pasteurizer features:

- I. Has geared motor fixed with agitator for mixing the product.
- II. Has temperature monitoring gauge.
- III. Made of stainless steel grade 304 or grade 316 depending with use.
- IV. Installed with its control panel.
- V. It consists of three shells, inner shell for product, middle shell for hot water and outer shell for cladding. ie the product is heated indirect using water.
- VI. Comes in variety of 3 heating options i.e. gas, elements or steam.



Capacity in liters Price KSh

100lts	160,000
150lts	180,000
200lts	200,000
500lts	350,000
1000lts	640,000

LINE PASTEURIZER

Our line pasteurizers are equipped with regeneration selection, which means that warm milk is used to heat up cold milk before it enters the pasteurizing part. This ensures low energy costs. A digital pen recorder keeps track of the temperature of the milk in the pasteurizer at all times.

The pasteurizer features automatic control by a PLC and a compact framework and can be equipped with duo safety plates.



Capacity in liters/hour

Price KSh

5000lts/hr - 10,000lts/hr

1000,000 - 7000, 000

CHILLERS/COOLING TANKS

Features:

- I. It comes complete with its control panel.
- II. It has inbuilt condensing unit depending with the size of the tank.
- III. Stainless steel fabricated using stainless steel food grade.
- IV. Consists of three shells, inner shell for product, middle shell for copper tubes for refrigeration and outer shell for cladding i.e. the product is cooled indirect.
- V. Has a temperature monitoring gauge geared motor fixed with agitator for mixing the product.



Capacity in liters Price KSh

100lts	250,000
200lts	300,000
300lts	360,000
500lts	460,000
1000lts	700,000
2000lts	1,200,000
3000lts	1,600,000
5000lts	2,400,000
10,000lts	4,700,000



Milk ATMs

Features:

- I. Digital control panel (PLC) which is calibrated in Kenya shillings.
- II. Stainless steel food grade milk tanks, Food grade tubes piping and pumps.
- III. Pocket friendly, made in Kenya and certified.
- IV. It has self-cleaning vending tubes.
- V. Small in size, takes a little space and it's mobile in case you want to shift.
- VI. It is password protected hence no tampering with its programs.
- VII. Ability to calculate daily sales in Kenya shillings and milk in litres.
- VIII. Accepts M-Pesa/coins/GSM control/digital PLC input.
- IX. Can dispense as low as 10ksh.
- X. Customized branding as per the clients request.

NB: For every 50lts tamper proof tank add Ksh18,000.



Capacity in liters	Price KSh
50lts	70,000
100lts	85,000
150lts	110,000
200lts	140,000
250lts	170,000
300lts	200,000

Salad/cooking oil ATMs

Features:

- I. Digital control panel (PLC) which is calibrated in Kenya shillings.
- II. Heating system to allow heating of the salad oil on extreme cold temperatures to prevent solidifying.
- III. Stainless steel food grade tanks, Food grade tubes piping and pumps
- IV. Pocket friendly , made in Kenya and certified.
- V. It has self-cleaning vending tubes.
- VI. Small in size, takes a little space and it's mobile in case you want to shift.
- VII. It is password protected hence no tampering with its programs.
- VIII. Reprogrammable features to suit the client.
- IX. Ability to calculate daily sales in Kenya shillings and salad in litres.
- X. Accepts M-Pesa/coins/GSM control/digital PLC input.
- XI. Can dispense as low as 10ksh.
- XII. One year warranty.
- XIII. Customized branding as per the clients request.



Capacity in liters	Price KSh
20lts	35,000
70lts	40,000
120lts	50,000
160lts	60,000
200lts	75,000

DUAL VENDING SALAD ATMS



SINGLE VENDING SALAD ATMS



SALAD COOKING ATMS

SALAD COOKING ATMS



MILK ATMS

MILK ATMS



MILK ATMS



DETERGENT VENDING ATMS



MTEULE FRESH WATER PURIFIERS



REVERSE OSMOSIS WATER PURIFIERS





MANUAL WATER FILLING STATION



WATER STATION WITH PLC



COIN OPERATED WATER STATION



BATCH PASTEURIZER



BATCH PASTEURIZER



MILK COOLING TANK/CHILLER



MILK COOLING TANK/CHILLER

OUTSOURCING CONTRACTS

Control Systems Outsourcing Contracts



Mteule control systems acquisition outsourcing contract is ideal for you because it helps eliminate the tedious work of sourcing for and importing the unit. We out-source for: Industries with production lines, large horticultural farms and other industries that need control systems.

We source for the most technologically and engineering advanced systems that help increase efficiency and cut cost of operations for your business.

Industrial Equipment Outsourcing Contracts

Our industrial equipment outsourcing contract is designed to help business that would like to acquire any industrial equipment for their operations. We handle the process of sourcing, purchasing and shipment for you.

Due to the complicated, tedious and long process involved, our industrial equipment outsourcing contract helps you acquire your business equipment with less hustle.



Machinery Outsourcing Contracts

Mteule machinery acquisition outsourcing contract is an arrangement where we handle the process of acquiring the machinery you want for you. This helps you avoid the hustle of the tedious, complicated and time consuming process.

We source the machinery and advice what is available for you to choose. We then handle the whole process of purchasing and shipment to your premises/location.



Mteule NOTES

A. Payment

At Mteule Commercial Kitchens & Water Solutions Engineering we propose 70% payment on order, 30% on collection and commissioning.

B. Delivery

Maximum of 10 days after placing the order.

C. Warranty

The equipment offered is covered under standard warranty period of one year.

(Enclosed, please find our standard terms of warranty.)

D. Validity

- Due to input cost uncertainties, this proposal is subject to confirmation at the date of order.
- Installation charges are budgetary and are subject to confirmation after we conduct a site survey.
- We recommend that the client avails an operator for the equipment. This person does not need to be a water technician, but must at least be able to read and write, and must be a quick learner.
- We shall be available to offer training at our workshops and also on site. The operator will be required to carry out regular plant monitoring and maintenance duties, including refilling chemical tanks with the correct weights of chemical cleaning out