

Annex 3 – Products technical specifications.

Item # 1: Pump kit, surface water, 4" - Diesel Engine

Diesel powered water pump set with 4" suction and delivery connection to be used for pumping from source to storage or for distribution. Capable of delivering up to 35 litres/sec. at 20 meters head. The kit must include hoses, all fitting for initial set-up and operation of the pump and service spare parts for 1 year of operation.

The kit must include:

- 1 Pump set, Atalanta Osprey 452 4"x4"/Lombardini 9LD625-2 diesel engine or similar.
- 1 Starting handle
- 1 Guillemín coupling DN100 - 4" BSP(F) thread with locking ring and sealing washer, fitted to suction side
- 1 Reducer 4-3" BSP(F-F) thread, fitted to delivery side

Suction Hose with:

- 10 Metre(s) of Hose, Flexible reinforced, 4", PVC
- 1 Valve, Foot, 100mm
- 1 Guillemín coupling, DN100, Hose tail with locking ring and sealing washer
- 2 Clamp, Hose, 4"
- 2 Guillemín DN100, sealing washer - spare

Valve assembly

- 1 Nipple, Hex, 3" BSP(M), GI
- 1 Valve, Gate, 3"
- 1 Nipple, Hex, 3" BSP(M), GI
- 1 Valve, Non-return, 3" BSP(F), Brass
- 1 Guillemín DN80 - 3" BSP(M) coupling with locking ring and sealing washer

Delivery hose

- 1 x 4 Meters of Hose, Flexible reinforced, 3", PVC
- 1 Guillemín DN80 Hose tail with locking ring and sealing washer
- 1 Hose clamp, 3"
- 2 Guillemín DN80, sealing washer - spare

Additional fittings

- 2 Nipple, Hex, 3" BSP(M), GI
- 1 Sweep bend, 90°, 3" BSP(F), GI
- 1 Coupling, Hose, 3" BSP (F), MI/Brass
- 2 Sealing washer for line 20 - spare
- 1 Guillemín DN80 hose tail with locking ring and sealing washer
- 1 Guillemín DN80 - 3" BSP(F) coupling with locking ring and sealing washer
- 4 Roll(s) Tape/thread, PTFE
- 2 Hose clamp, 3"
- 1 Guillemín wrench DN80-100

Mounting Bolts

- 4 Bolts, M10 x 100mm, with nuts and washers

Pump spares for 1 year of operation

- 2 Mechanical shaft seal
- 2 Inlet gasket/clack valve
- 1 Outlet gasket
- 1 Body gasket
- 1 O-ring
- 2 Plug
- 2 Plug washer

Engine consumables and spares sets for 1-year operation

- 12 Fuel filter element + brass washer
- 12 Oil filter element
- 5 Litre(s) of 15w/40 Engine oil
- 1 Adjustable spanner
- 1 Strap wrench - for oil filter
- 1 Allen key set, 1 - 10 mm
- 1 Spanner, 13 mm
- 1 Combination pliers

Item # 2: Bladder Tanks

6m³ (6,000 Litres or 6 tons.) volume transport/trucking bladder tank, with a maximum width 2.2m for use on a flat bed truck. The transport/trucking bladders will be used for water trucking operations and to support construction works. The kits must be supplied with hoses, fittings, and accessories for immediate use.

Sizes: (when full): Length 3.9 m, Width 2.2 m, Height 0.45 max

Made of UV resistant, food grade, PVC coated, polyester fabric (minimum 1100 g/m²). Materials must be suitable for chlorinated drinking water. Seams must be heat or high frequency welded.

4" (internal measurement) screwed filler cap with captive cord

Heavy duty 50mm polyester webbing with reinforced loops and 2x 50mm heavy duty webbing straps (two each end) with reinforced loops for securing the tank to a vehicle or trailer

Tanks fitted must be supplied with the following:

- 2 x 2" BSP(M) stub fitting (both at the same end) with anti-chafe patches and flap
- 2 x 2 pressure relief valves (2 psi) with rubber plugs

Components included

- 1 Bladder tank
- 2 Valve, Gate, 2", Brass
- 1 Tee, Equal, 2" BSP(F), plastic
- 4 Bush, Reducer, 2" BSP(M) to 1" BSP(F), plastic
- 4 Adaptor, compression, 32 mm to 1" BSP(M), PE
- 2 Tee, compression, 32 mm, PE
- 2 Nipple, 2" BSP(M), GI
- 4 Rolls Tape, PTFE
- 1 Groundsheet
- 1 Holdall bag
- 1 Kit Repair kit - no glue

Item # 3: Water testing kit, Microbiological and Chemical

Portable water quality water testing kit incorporating: bacteriological testing kit to measure for total coliforms and faecal coliforms, plus testing for chemical parameters according to WHO guidelines.

The kit must be suited for longer term, professional, water quality monitoring.

For bacteriological testing the unit should have dual incubators and an internal, rechargeable battery.

For chemical testing the kit should include digital instrumentation enabling high levels of precision and accuracy in the results.

Consumables and reagents for 200 repetitions of each test must be included.

Test parameters:

- Ammonia, Free + Total Chlorine, Fluoride, Nitrate, Nitrite
- Conductivity, pH, Total Dissolved Solids (TDS) Temperature, Turbidity
- Total Coliform, Thermotolerant (faecal) coliform

Palintest PTW10010XA or similar Portable water quality water testing kit should be supplied with :

Case 1:

- Dual Potalab Incubators, each with petri dish rack and 20 petri dishes.
- High performance Lead Acid battery with capacity for at least 5 cycles per incubator.
- Mains charger with international adaptors, vehicle charger and external battery clips;
- Membrane Filtration Unit, bronze disc, pistol grip vacuum pump with no-kink silicone tubing, 5 Media Measuring Devices (MMDs),
- 38.1g Membrane Lauryl Sulphate Broth

- 5 Pasteur pipettes, hand lens, forceps, 200 sterile membrane filters, 200 absorbent pads, absorbent pad dispenser, steel sampling cup, sampling cable Polypropylene 250ml beaker
- quick start prompt cards, full microbiological instruction manual.

Case 2:

- Photometer 7500 and light cap, x6 photometer cuvettes, photometer reagents for 200 tests for Free and Total Chlorine, Ammonia, Fluoride, Nitrite, Nitrate
- Turbimeter Plus, SDVB calibration standards, x4 sample cuvettes, silicone oil, cleaning/oiling cloth
- Micro 800 pH/Temperature Meter with pH calibration buffer fluid
- Micro 800 Conductivity/TDS Meter with conductivity calibration standard fluid, Cuvette brush, Dilution tubes, crush/stir rods, De-ion pack, User Manual

Item # 4: Water measuring and test kit

Water Measuring & Test Kit of tools and items used for testing and monitoring water quality during treatment process. The equipment must include the essentials for any water quality monitoring programme and water treatment operation.

Components included:

- 3 Kits Pooltester - for Chlorine/pH Testing
- 6 Boxes Tablets, Rapid Test - DPD1
- 3 Boxes Tablets, Rapid Test, DPD3
- 3 Boxes Tablets, Rapid Test, Phenol Red
- 1 Colour comparator disc, for Aluminium, range 0-0.5mg/l
- 1 Box Reagent tablets, Aluminium 250 pce
- 1 Kit Colour comparator kit, for total Iron. range 0-10mg/l, with reagents for 50 tests
- 1 Test meter, Multi-parameter, with pH buffer solution and TDS calibration fluid
- 1 Bottle Buffer solution, pH7, 60 ml
- 1 Bottle Calibration fluid, 60 ml
- 1 Thermometer, range -10 to +50°C (spirit filled, non-hazardous)
- 1 Turbidity Tube
- 1 Funnel, Plastic, 6.5cm Ø
- 1 Cylinder, Measuring, 50ml, Plastic
- 6 Beaker, Plastic, 1000ml, with 100ml graduations
- 10 Bottles, Sample, Plastic, 100ml, with 10ml graduations
- 3 Syringes, 10ml, Plastic, with 1ml graduations
- 4 Buckets, with lid, 12 litre, with 1 litre graduations
- 2 Rod, Stirring, 0.5 m long, Plastic
- 2 Forks, Dining, Stainless steel
- 1 Stopwatch, with batteries
- 1 Instruction book