

UNICEF - WATER & SANITATION - PHASE VII

1.3 Water Treatment and Quality Control

Code	Description	Unit	Qty
03-04-00001	Calcium hypochlorite in granular form having minimum 65-70 % chlorine packed in 45 or 50 Kg plastic container/ drums of export quality. (Hypocal = Registered brand (HTH) of OLIN.	Kg	45000
03-04-00002	Chlorine gas (purity 99.7%) in one ton cylinder (empty cylinders will be provided) including repairing of old chlorine cylinders before refilling.	Ton	70
03-04-00003	Chlorine gas (purity 99.7%) in 65 Kg cylinder (empty cylinders will be provided) including repairing of old chlorine cylinders before refilling.	Ton	35
03-04-00004	Aluminum sulfate for purifying water, AL ₂ O ₃ =16.5% Min, FE ₂ O ₃ =0.02% Max, PB=Nil, AS=1ppm Max, insoluble in water = 0.3% Max, pH (1% solution) = 1.7, solubility in water = 70 gm in 100 cc at 100 degree centigrade, granule size less than 1.19 mm = 3%, packed in export quality polyethylene bags of 50 Kg each.	Ton	35
03-04-00005	Slow dissolving chlorine tablets of each 200 gm for disinfecting water (used also for swimming pool), packed in 2 Kg plastic container (or any suitable size).	Kg	900
03-04-00006	Chlorine solution dosing pump, type ALLDOS, KM 220-1 or equivalent, capacity 24Lit/hr, Back pressure = 10 Bar, Strokes (No Load) = 120, single phase, 240 V, 50 Hz, 1,500 RPM. With O&M manuals and spare parts catalogue in Arabic/English, and spare parts for two years operation to be included as well as section line with non return valve including cleaning system for flushing.	Set	130
03-04-00007	V-notch, full vacuum chlorinator, wall mounted, single cylinder operation for open application, including 10 M of 6.5mm vacuum tube, 16 M of 19 mm solution hose, hose clips, bottle of leach detector, instruction manual and spare parts for two years operation. Capacity = 250 g/hr, water gauge = 150 psi, gas gauge = 200 psi, operating pressure 15M, back pressure = 0 with injector set. With O&M manuals and spare parts catalogue in Arabic/English HOSE/PIPE TO BE SUPPLIED SEPARATELY FOR EACH UNIT.	Set	5
03-04-00008	Ditto item 7, capacity = 500 g/hr	Set	11
03-04-00009	Ditto item 7, capacity = 1,000 g/hr	Set	17
03-04-00010	Same as item 7, floor mounted, capacity = 2,000 g/hr	Set	8
03-04-00011	Spare parts are for G20 Chlorine Dosing Pump serial No: X15593 Valve Body - Part No.JPXN 83388	Each	8
03-04-00012	Spare parts are for G20 Chlorine Dosing Pump serial No: X15593 Valve Cover RPVC - Part No: JPXN 82822	Each	8
03-04-00013	Spare parts are for G20 Chlorine Dosing Pump serial No: X15593 form Wallace and Tiernan Valve Seat RPVC - Part No: JPNX 82821	Each	8
03-04-00014	Spare parts are for G20 Chlorine Dosing Pump serial No: X15593 Ball, Pyrex - Part No. NPXA 150	Each	8

Code	Description	Unit	Qty
03-04-00015	Spare parts are for KM 220-1 Chlorine Dosing Pump, Serial No: CO13977 from T.M. Products Diaphragm - Part No. 10-2257-401	Each	8
03-04-00016	Spare parts are for KM 220-1 Chlorine Dosing Pump, Serial No: CO13977 from T.M. Products Oil Gauge Window - Part No. 10.147	Each	8
03-04-00017	Spare parts are for KM 220-1 Chlorine Dosing Pump, Serial No: CO13977 from T.M. Products Double Ball Valve - Part No. 10.137-41	Each	8
03-04-00018	Spare parts are for KM 220-1 Chlorine Dosing Pump, Serial No: CO13977 from T.M. Products Ball Cage - Part No. 10.786-41	Each	8
03-04-00019	Spare parts are for KM 220-1 Chlorine Dosing Pump, Serial No: CO13977 from T.M. Products Ball - Par No. 10.139	Each	8
03-04-00020	Spare parts are for KM 220-1 Chlorine Dosing Pump, Serial No: CO13977 from T.M. Products Cover for discharge (Non-return) Valve	Each	8
03-04-00021	Spare parts are for KM 220-1 Chlorine Dosing Pump, Serial No: CO13977 from T.M. Products Pressure Spring, Part No. 10.890	Each	8
03-04-00022	Spare parts are for KM 220-1 Chlorine Dosing Pump, Serial No: CO13977 from T.M. Products Adjusting Spindle, Part No 10.2081-4	Each	8
03-04-00023	Spare parts are for KM 220-1 Chlorine Dosing Pump, Serial No: CO13977 from T.M. Products Cup Nut, Part No. 50.208	Each	8
03-04-00024	Aluminum Sulfate Diaphragm pump with variable manual stroke control mechanism with 2.5 meter suction hose and 3.5 meter discharge hose and relief valve for pump protection against over pressure Q=500 l/hr, H=2 bar 240v, 50 HZ, single phase with all accessories required for installation and spare parts for 2 years operation and O&M manual in English/ Arabic with parts catalogue.	Set	12
03-04-00025	Vertical Multistage booster pump for chlorination purpose. Q=4 cum/hr, H=120 m with electrical drive motor and control panel, 380V, 50Hz, 3 phase with spare parts for two years of operation.	Set	11
03-04-00026	HDPE flexible pipe, heavy duty for chlorination purpose, diameter 1 inch, with joints, (12-16)	ML	650
03-04-00027	HDPE flexible pipe, heavy duty for chlorination purpose, diameter 3/4 inch, with joints, (12-16) bar	ML	450
03-04-00028	Base for mounting 65 Kg chlorine gas cylinders vertically with a (0-150) kg balance for monitoring of chlorine weight.	Each	3
03-04-00029	Spare parts for powder chlorinator type G020 - Pump Series GTM Model A Filter for foot valve. See Instruction Manual, page I-4, Fig 1.4a, A. Parts as below:	Each	0
03-04-00030	Valve Seat for foot valve. See Instruction Manual, page I-4, Fig 1.4a, A.	Each	24

Code	Description	Unit	Qty
03-04-00031	Valve Housing for foot valve. See Instruction Manual, page I-4, Fig 1.4a, A.	Each	24
03-04-00032	Ball for foot valve. See Instruction Manual, page I-4, Fig 1.4a, A.	Each	80
03-04-00033	Ball Seat for foot valve. See Instruction Manual, page I-4, Fig 1.4a, A.	Each	80
03-04-00034	4-Function Valve. See Instruction Manual, page I-4, Fig 1.4a, B.	Each	45
03-04-00035	Valve Housing for Injection Nozzle. See Instruction Manual, page I-4, Fig 1.4a, C.	Each	45
03-04-00036	Spring for Injection Nozzle. See Instruction Manual, page I-4, Fig 1.4a, C.	Each	45
03-04-00037	Ball for Injection Nozzle. See Instruction Manual, page I-4, Fig 1.4a, C.	Each	45
03-04-00038	Ball Seat for Injection Nozzle. See Instruction Manual, page I-4, Fig 1.4a, C.	Each	45
03-04-00039	Valve Body Seat for Injection Nozzle. See Instruction Manual, page I-4, Fig 1.4a, C.	Each	45
03-04-00040	Stroke Adjustment Knob for Mechanical assembly. See Instruction Manual, page I-1, Fig 1.2a	Each	45
03-04-00041	O-Ring for Mechanical assembly. See Instruction Manual, page I-1, Fig 1.2a	Each	110
03-04-00042	Stroke Adjustment Screw for Mechanical assembly. See Instruction Manual, page I-1, Fig 1.2a	Each	110
03-04-00043	Crosshead for Mechanical assembly. See Instruction Manual, page I-1, Fig 1.2a	Each	110
03-04-00044	Male Eccentric Piece for Mechanical assembly. See Instruction Manual, page I-1, Fig 1.2a	Each	24
03-04-00045	Stroke Locking Device for Mechanical assembly. See Instruction Manual, page I-1, Fig 1.2a	Each	24
03-04-00046	Half stop ring for Mechanical assembly. See Instruction Manual, page I-1, Fig 1.2a	Each	24
03-04-00047	Tangential Wheel for Mechanical assembly. See Instruction Manual, page I-1, Fig 1.2a	Each	24
03-04-00048	Stop Bearing for Mechanical assembly. See Instruction Manual, page I-1, Fig 1.2a	Each	24
03-04-00049	Cover Seal for Mechanical assembly. See Instruction Manual, page I-1, Fig 1.2a	Each	45
03-04-00050	Liquid End Mounting Assembly. See Instruction Manual, page I-1, Fig 1.2a	Each	45
03-04-00051	Liquid End. See Instruction Manual, page I-1, Fig 1.2a	Each	45
03-04-00052	Ball bearings for powder chlorinator, size SKF 6200	Each	24
03-04-00053	Ball bearings for powder chlorinator, size SKF 6201	Each	24
03-04-00054	Ball bearings for powder chlorinator, size SKF 6202	Each	24
03-04-00055	Ball bearings for powder chlorinator, size SKF 6203	Each	24
03-04-00056	Gas masks/breathing apparatus for protection from chlorine gas used in water treatment facilities	Each	90

Code	Description	Unit	Qty
03-04-00057	Glass tube special for OZONE Generator type G250. Glass thickness 1mm and diameter 4 cm and length 136 cm.	Each	2
03-04-00058	Fuse 0.5A, V 10KV, thickness 1mm, internal diameter 5mm and length 15cm part number Lr 7004310.	Each	10
03-04-00059	Spare parts for V-notch chlorinator type V-50 BM25-164. Parts as below:	Each	0
03-04-00060	Ditto item 59 Flexible connection, part number U. 103 B	Each	40
03-04-00061	Ditto item 59 Hose clamp, part number U. 553 (19.5MM)	Each	400
03-04-00062	Ditto item 59 Hose clamp, part number U.553 (25 MM)	Each	400
03-04-00063	Ditto item 59 Hose adapter, part number P. 40112	Each	100
03-04-00064	Ditto item 59 Auxiliary cylinder valve, part number U. 12 43 B	Each	30
03-04-00065	Ditto item 59 Lead gasket, part number P.2476 B	Each	2000
03-04-00066	Ditto item 59 Lead gasket, part number P.2619	Each	2000
03-04-00067	Ditto item 59 Solution discharge line, part number RK811-4305	Each	1000
03-04-00068	Ditto item 59 Strainer 3/4inch, part number U. 810	Each	60
03-04-00069	Ditto item 59 Wreck, part number P.5822	Each	80

03-04-00070	Proj 1	Water Treatment & Testing
03-04-00071	Urban & Semi-Urban Water Supplies	Water Treatment Equipment
03-04-00072		Pipes and Specials
03-04-00073		Other Materials
03-04-00074	Proj 2	Submersible Pumps & Specials
03-04-00075	Urban & Semi-Urban Water Supplies	Vertical Turbine Pumps
03-04-00076		Booster Pumps & Spare Parts
03-04-00077		Electrical Equipment & Spares
03-04-00078		Generators & Spares
03-04-00079		Tools & Accessories
03-04-00080	Proj 3	Sanitation Vehicles & Spares
03-04-00081	Urban & Semi-Urban Sanitation Equipment	Other Materials
03-04-00082	Proj 4	Metal Pipes and Fittings
03-04-00083	Rural Water Supplies & Sanitation	Construction and Sanitary Materials
03-04-00084		Pumps and Spare Parts
03-04-00085		Materials for Deepwell Drilling Operation
03-04-00086		Other Materials