

UNICEF WATER & SANITATION PHASE XII

Subproject 1: Urban Household Water Security

3- Water Quality and Pollution Prevention

| Code | Description | | |
|-------------|---|--|--|
| 03-05-00001 | Calcium hypo chlorite 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. | | |
| 03-05-00002 | Chlorine gas (purity 99.7%) in one ton cylinder (empty cylinders will be provided by the Iraqi government) including repairing of old chlorine cylinders before refilling. | | |
| 03-05-00003 | Chlorine gas (purity 99.7%) in 65 Kg cylinder (empty cylinders will be provided by the Iraqi government) including repairing of old chlorine cylinders before refilling. | | |
| 03-05-00004 | 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. | | |
| 03-05-00005 | 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). | | |
| 03-05-00006 | 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. | | |
| 03-05-00007 | 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. | | |
| 03-05-00008 | Ditto as above but, capacity = 500 g/hr | | |
| 03-05-00009 | Ditto as above but, capacity = 1,000 g/hr | | |
| 03-05-00010 | Same as above, floor mounted, capacity = 2,000 g/hr | | |

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| Code | Description | | |
|-------------|---|--|--|
| 03-05-00011 | Spare parts are for G20 Chlorine Dosing Pump serial No: X15593 Valve Body - Part No.JPXN 83388 | | |
| 03-05-00012 | Spare parts are for G20 Chlorine Dosing Pump serial No: X15593 Valve Cover RPVC - Part No: JPXN 82822 | | |
| 03-05-00013 | Spare parts are for G20 Chlorine Dosing Pump serial No: X15593 Valve Seat RPVC - Part No: JPNX 82821 | | |
| 03-05-00014 | Spare parts are for G20 Chlorine Dosing Pump serial No: X15593 Ball, Pyrex - Part No. NPXA 150 | | |
| 03-05-00015 | Spare parts are for KM 220-1 Chlorine Dosing Pump, Serial No: CO13977 Diaphragm - Part No. 10-2257-401 | | |
| 03-05-00016 | Spare parts are for KM 220-1 Chlorine Dosing Pump, Serial No: CO13977 Oil Gauge Window - Part No. 10.147 | | |
| 03-05-00017 | Spare parts are for KM 220-1 Chlorine Dosing Pump, Serial No: CO13977 Double Ball Valve - Part No. 10.137-41 | | |
| 03-05-00018 | Spare parts are for KM 220-1 Chlorine Dosing Pump, Serial No: CO13977 Ball Cage - Part No. 10.786-41 | | |
| 03-05-00019 | Spare parts are for KM 220-1 Chlorine Dosing Pump, Serial No: CO13977 Ball - Par No. 10.139 | | |
| 03-05-00020 | Spare parts are for KM 220-1 Chlorine Dosing Pump, Serial No: CO13977 cover for discharge (Non-return) Valve | | |
| 03-05-00021 | Spare parts are for KM 220-1 Chlorine Dosing Pump, Serial No: CO13977 Pressure Spring, Part No. 10.890 | | |
| 03-05-00022 | Spare parts are for KM 220-1 Chlorine Dosing Pump, Serial No: CO13977 Adjusting Spindle, Part No 10.2081-4 | | |
| 03-05-00023 | Spare parts are for KM 220-1 Chlorine Dosing Pump, Serial No: CO13977 Cup Nut, Part No. 50.208 | | |
| 03-05-00024 | Aluminum Sulfate Diaphragm dosing 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. | | |
| 03-05-00025 | 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. | | |
| 03-05-00026 | HDPE flexible pipe, heavy duty for chlorination purpose, diameter 1 inch, with joints, (12-16) | | |
| 03-05-00027 | HDPE flexible pipe, heavy duty for chlorination purpose, diameter 3/4 inch, with joints, (12-16) bar | | |

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| Code | Description | | |
|-------------|---|--|--|
| 03-05-00028 | Base for mounting 65 Kg chlorine gas cylinders vertically with a (0-150) kg balance for monitoring of chlorine weight. | | |
| 03-05-00029 | Spare parts for powder chlorinator type G020 from Dosapro Milton Roy - Pump Series GTM Model A Filter for foot valve. See Instruction Manual, page I-4, Fig 1.4a, A. | | |
| 03-05-00030 | Valve Seat for foot valve. See Instruction Manual, page I-4, Fig 1.4a, A. | | |
| 03-05-00031 | Valve Housing for foot valve. See Instruction Manual, page I-4, Fig 1.4a, A. | | |
| 03-05-00032 | Ball for foot valve. See Instruction Manual, page I-4, Fig 1.4a, A. | | |
| 03-05-00033 | Ball Seat for foot valve. See Instruction Manual, page I-4, Fig 1.4a, A. | | |
| 03-05-00034 | 4-Function Valve. See Instruction Manual, page I-4, Fig 1.4a, B. | | |
| 03-05-00035 | Valve Housing for Injection Nozzle. See Instruction Manual, page I-4, Fig 1.4a, C. | | |
| 03-05-00036 | Spring for Injection Nozzle. See Instruction Manual, page I-4, Fig 1.4a, C. | | |
| 03-05-00037 | Ball for Injection Nozzle. See Instruction Manual, page I-4, Fig 1.4a, C. | | |
| 03-05-00038 | Ball Seat for Injection Nozzle. See Instruction Manual, page I-4, Fig 1.4a, C. | | |
| 03-05-00039 | Valve Body Seat for Injection Nozzle. See Instruction Manual, page I-4, Fig 1.4a, C. | | |
| 03-05-00040 | Stroke Adjustment Knob for Mechanical assembly. See Dosapro Instruction Manual, page I-1, Fig 1.2a | | |
| 03-05-00041 | O-Ring for Mechanical assembly. See Instruction Manual, page I-1, Fig 1.2a | | |
| 03-05-00042 | Stroke Adjustment Screw for Mechanical assembly. See Instruction Manual, page I-1, Fig 1.2a | | |
| 03-05-00043 | Crosshead for Mechanical assembly. See Instruction Manual, page I-1, Fig 1.2a | | |
| 03-05-00044 | Male Eccentric Piece for Mechanical assembly. See Instruction Manual, page I-1, Fig 1.2a | | |
| 03-05-00045 | Stroke Locking Device for Mechanical assembly. See Instruction Manual, page I-1, Fig 1.2a | | |
| 03-05-00046 | Half stop ring for Mechanical assembly. See Instruction Manual, page I-1, Fig 1.2a | | |
| 03-05-00047 | Tangential Wheel for Mechanical assembly. See Instruction Manual, page I-1, Fig 1.2a | | |

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| Code | Description | | |
|-------------|--|--|--|
| 03-05-00048 | Stop Bearing for Mechanical assembly. See Instruction Manual, page I-1, Fig 1.2a | | |
| 03-05-00049 | Cover Seal for Mechanical assembly. See Instruction Manual, page I-1, Fig 1.2a | | |
| 03-05-00050 | Liquid End Mounting Assembly. See Instruction Manual, page I-1, Fig 1.2a | | |
| 03-05-00051 | Liquid End. See Instruction Manual, page I-1, Fig 1.2a | | |
| 03-05-00052 | Ball bearings for powder chlorinator, size SKF 6200 | | |
| 03-05-00053 | Ball bearings for powder chlorinator, size SKF 6201 | | |
| 03-05-00054 | Ball bearings for powder chlorinator, size SKF 6202 | | |
| 03-05-00055 | Ball bearings for powder chlorinator, size SKF 6203 | | |
| 03-05-00056 | Gas masks/breathing apparatus for protection from chlorine gas used in water treatment facilities | | |
| 03-05-00057 | Glass tube special for OZONE Generator type G250 from company (SHOTT GERATE) or equivalent. Glass thickness 1mm and diameter 4 cm and length 136 cm. | | |
| 03-05-00058 | Fuse 0.5A, V 10KV, thickness 1mm, internal diameter 5mm and length 15cm part number Lr 7004310 | | |
| 03-05-00059 | Spare parts for V-notch chlorinator type V-50 BM25-164 | | |
| 03-05-00060 | Spare parts for V-notch chlorinator type V-50 BM25-164: flexible connection part | | |
| 03-05-00061 | Ditto but Hose clamp, part number U. 553 (19.5MM) | | |
| 03-05-00062 | Ditto but Hose clamp, part number U.553 (25 MM) | | |
| 03-05-00063 | Ditto but Hose adapter, part number P. 40112 | | |
| 03-05-00064 | Ditto but Auxiliary cylinder valve, part number U. 12 43 B | | |
| 03-05-00065 | Ditto but Lead gasket, part number P.2476 B | | |
| 03-05-00066 | Ditto but Lead gasket, part number P.2619 | | |
| 03-05-00067 | Ditto but Solution discharge line, part number RK811-4305 | | |
| 03-05-00068 | Ditto but Strainer 3/4inch, part number U. 810 | | |
| 03-05-00069 | Ditto but Wreck, part number P.5822 | | |

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| Code | Description | | |
|--------------------|---|--|--|
| 03-05-00070 | Aluminum Sulfate Diaphragm dosing 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=100 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. | | |
| 03-05-00071 | Same as item above but: Q=500/hr, H= 2 bar | | |
| 03-05-00072 | Pipes and fittings for vacuum gas chlorinator type ALLDOS, capacity 4000 g/hr: Ref: ALLDOS Quotation Nr. 39529 for Erbil plant (44 items). | | |
| 03-05-00073 | Same as item above but: Quotation Nr. 39531 for Ifraz plant (19) items: | | |