

REQUIREMENTS OF THE MAYORALTY OF BAGHDAD , PHASE 13

SECTION 1 : WATER TREATMENT PLANT AND NETWORK
SECTION 1-1 : SPARE PART LIST FOR WATER TREATMENT PLANT
SECTION 1-1-1:ABU GHRAIB RES
SECTION 1-1-2:SOUTH RES
SECTION 1-1-3: NORTH RES
SECTION 1-1-4: AL KARKH TREATMENT PLANT
SECTION 1-1-5: TAJI RES.
SECTION 1-1-6: SPARE PARTS FOR AL- RASHED PROJECT
SECTION 1-1-7: SPARE PARTS FOR AL- WAHDA PROJECT
SECTION 1-1-8: SPARE PART FOR RAW WATER STATION
SECTION 1-2: COMPACT UNIT
SECTION 1-3: SUPPLY AND ERECTION OF COMPLETE PASSENGER LIFT , ALL
SECTION 1-4 : BALL BEARING
SECTION 1-5: A859SUBMERSIBLE PUMP
SECTION 1-6: Ductile Iron Fitting Suitable for Ductile Iron Pipes
SECTION 1-7 : CAST IRON FITTINGS FOR UPVC PIPES
SECTION 1-8 : SADDLES WITH FURREL
SECTION 1-9 : STAINLESS STEEL CLAMPS
SECTION 4: WATER TREATMENT PLANTS REQUIREMENT
DUCTILE PIPES WITH DIAMETERS (1400-2000) WITH FITTINGS
VALVES (1400-2000) MM DIAMETERS , ELECTRICALLY AND MANUALLY
VERTICAL RAW WATER PUMPS WITH CONTROL PANELS AND VALVES
ELECTRIC DISTRIBUTION BOARD FOR RAW WATER PUMPS
TRANSFORMERS FOR RAW WATER PUMPING STATION
VERTICAL PUMPS FOR TREATED WATER WITH CONTROL PANELS AND
ELECTRIC DISTRIBUTION BOARD FOR TREATED WATER PUMPS
TRANSFORMERS FOR TREATED WATER PUMPING STATION
MAIN SUB STATION FOR THE HEAD WORK
GUNTRY CRANE
SECTION 2 : SEWAGE TREATMENT PLANT AND NETWORK
SECTION 2-1: SPARE PARTS FOR SEWAGE TREATMENT PLANTS AND SEWAGE
SECTION 2-2: SEWAGE SUBMERSIBLE PUMPS WITH THE FOLLOWING
SECTION 2-3: DIFFERENT TYPE OF VERTICAL SEWAGE WITH ELECTRIC
SECTION 2-4: DIFFERENT SIZE OF DIESEL GENERATING SET FOR SEWAGE
SECTION 2-5: DIFFERENT SIZE OF DIESEL GENERATING SET FOR SEWAGE
SECTION 2-6: SAFETY REQUIREMENTS FOR SEWAGE WORK
SECTION 2-7: SEWAGE TREATMENT COMPACT UNIT FLOW 10000 M3 / DAY
SECTION 2-8: DIFFERENT TYPE OF PIPES FOR SEWAGE WORK
SECTION 2-9: MATERIAL AND EQUIPMENTS FOR SEWAGE WORK
CCTV SURVEY STEP VAN :
MULTI GAS DETECTOR -4 GASES SUITABLE FOR SEWER AND CONFINED SPACE.
FLOW GAGES TO MEASURE FLOWS IN WASTEWATER COLLECTION SYSTEMS.
RAINFALL GAUGES:THE EQUIPMENT SHALL BE CAPABLE OF

SECTION 3 : MACHINERY AND EQUIPMENT

1. WHEEL LOADER
2. GRADER
3. TRUCK TRACTOR EQUIPPED WITH 50 TON SEMITRAILER
4. CEMENT FILLER TANK TRUCK 6×4

5. FULL HYDRAULIC TRUCK CRANE 8×4 30 TON ,
6. WHEEL EXCAVATOR
7. DRINKING WATER TANKER 6×4
8. ROAD SWEEPERS
9. TIPPING TRUCK
10. SELF PRIMING MOTOR PUMP SET -4"
SELF PRIMING MOTOR PUMP SET 6 "
- SELF PRIMING MOTOR SET 8"
11. MOTOR CYCLE 250 CC
12. MAINTENANCE TRUCK 4×2
13. FIELD VEHICLE, DOUBLE CAP ,PICK -UP
- 14.SPARE PARTS FOR MACHINERY AND EQUIPMENT

1. SPARE PARTS FOR STYRE GARBAGE AND CRANE , MODEL WD615.61
2. SPARE PARTS FOR MAINTENACE OF ROAD (B.M.C) PRO 827(4×2) 6521
3. SPARE PARTS FOR TOWERING LIFTER (B.M.C) MODEL PRO 620 (4×2)
- 4.SPARE PARTS FOR STYRE GARBAGE AND CRANE , MODEL WD615.61
5. SPARE PARTS FOR MAINTENACE OF ROAD (B.M.C) PRO 827(4×2) 6521
6. SPARE PARTS FOR TOWERING LIFTER (B.M.C) MODEL PRO 620 (4×2)
7. SPARE PARTS FOR TIPPER RENAULT , KERAX 350.34 6×4
8. SPARE PARTS FOR TIPPER RENAULT , KERAX 350.34 6×4
9. SPARE PARTS FOR GARBAGE & CESSBITE MAN 18-263LC-KOL 4×2 ENGINE MODEL DO826LFL , GEAR BOX MODEL EATON 8209
10. SPARE PARTS FOR GARBAGE & CESSBITE MAN 18-263LC-KOL 4×2 ENGINE MODEL DO826LFL M GEAR BOX MODEL EATON 8209
11. SPARE PARTS FOR ENGINE(BF6M 1013ECP-DEUTZ) USED IN FAW CARBAGE (TYPE CA5190)
- 12.SPARE PARTS FOR RENAULT GARBAGESCONTAINER LIFT , KERAX 260.19 4×2
13. SPARE PARTS FOR RENAULT GARBAGESCONTAINER LIFT , KERAX 260.19 4×2
- 14.SPARE PARTS FOR WHEEL EXCAVATOR DIWOO
- 15.SPARE PARTS FOR WHEEL EXCAVATOR DIWOO
16. SPARE PARTS FOR WHEEL EXCAVATOR DIWOO
- 17.SPARE PARTS FOR WHEEL EXCAVATOR DIWOO
18. SPARE PARTS FOR WHEEL EXCAVATOR CASE , MODEL 588
19. SPARE PARTS FOR WHEEL EXCAVATOR CASE , MODEL 588
20. SPARE PARTS FOR WHEEL EXCAVATOR CASE , MODEL 588
21. SPARE PARTS FOR TOYOTA . MODEL 1985, GASOLINE DOUBLE CAB , ENGINE 3Y
22. SPARE PARTS FOR TOYOTA . MODEL 1985, GASOLINE DOUBLE CAB , ENGINE 3Y
23. SPARE PARTS FOR WHEEL LOADER ZL15C
24. SPARE PARTS FOR WHEEL LOADER ZL15C
25. SPARE PARTS FOR WHEEL LOADER ZL15C
- 26.SPARE PARTS FOR JET VOLVO N10 , MODEL ENGINE TD101G273
- 27.SPARE PARTS FOR JET VOLVO N10 , MODEL ENGINE TD101G273
28. SPARE PARTS FOR JET VOLVO FL6 , PCFL618 4 ×2 , MODEL ENGINE D6A230
- 29.SPARE PARTS FOR JET VOLVO FL6 , PCFL618 4 ×2 , MODEL ENGINE D6A230
30. SPARE PARTS FOR JET VOLVO FL6 , PCFL618 4 ×2 , MODEL ENGINE D6A230
31. SPARE PARTS FOR JET VOLVO FL6 , PCFL618 4 ×2 , MODEL ENGINE D6A230
32. Spare parts related to Baghdad Mayoralty
33. SPARE PARTS FOR TIPPER CALABRESE Model 380 E 31
34. SPARE PARTS FOR IVECO EURO TRAKKER UNITS GARBAGE COLLECTION
35. SPARE PARTS FOR WHEEL LOADER ,TYPE ZL 40B
36. SPARE PARTS FOR WHEEL LOADER ,TYPE ZL 40ENGINE TYPE WD61500
15. COMPLETE ASPHALT PLANT
16. DIFFERENT TYPE OF ROLLERS FOR ASHALT WORK , , STEEL , WHEEL , CMBINED
17. CRUSHERS WITH SPAIR PARTS

REQUIREMENTS OF THE MAYORALTY OF BAGHDAD , PHASE 12

SECTION 1 : WATER TREATMENT PLNAT AND NETWORK REQUIREMENTS

SECTION 1-1 : SPARE PART LIST FOR WATER TREATMENT PLNAT

SECTION 1-1-1:ABU GHRAIB RES

CODE	DESCRIPTION	
	SPARES FOR 400/400/410 PUMP	
03-01-0001	WEAR RING	
03-01-0002	THRUST WASHER	
03-01-0003	LANTERN RING IN HALVES	
03-01-0004	COMPLET DRIVE SHAFTING INCLUDING PUMP COUPLINGS	
03-01-0005	NECK BUSH FIBER GLASS	
03-01-0006	BOTTOM BEARING FIBER GLASS	
03-01-0007	KEY FOR COUPLING DRIVE	
03-01-0008	HEAD LAND "V" RING (VS)	
03-01-0009	SPACER RING	

CODE	DESCRIPTION	
	SPARES FOR 350/300/429 PUMP	
03-01-0010	WEAR RING	
03-01-0011	THRUST WASHER	
03-01-0012	LANTERN RING IN HALVES	
03-01-0013	COMPLET DRIVE SHAFTING INCLUDING PUMP COUPLINGS	
03-01-0014	COMPLET PLUMMER BLOCK DESIGNATION SN 209	
03-01-0015	NECK BUSH FIBER GLASS	
03-01-0016	BOTTOM BEARING FIBER GLASS	
03-01-0017	KEY FOR COUPLING DRIVE	
03-01-0018	HEAD LAND "V" RING (VS)	
03-01-0019	SPACER RING	

CODE	DESCRIPTION	
	CONTACTOR : lth30A	
	V OPEN ENCLOSED	
03-01-0020	380 V 330KW 330 KW	
	415 V 360 KW 360KW	
	-----, -----	
	HIGH=20cm	
	CONTACTOR : lth110A	
	380 V 55KW	
03-01-0021	415 V 60 KW	
	-----, -----	
	HIGH=13cm	
	CONTACTOR : lth355A	
	380 V 185KW	
03-01-0022	415 V 200 KW	
	CONTACTOR DIMENTION : LENGTH = 15cm , WIDTH = 15cm ,	
	HIGH=19cm	

CODE	DESCRIPTION	
03-01-0023	ELECTRONIC TIMER	
	110V A.C , 8-pin , RANGE : 0-3 min	
03-01-0024	ELECTRONIC TIMER	
	110V A.C , 8-pin , RANGE : 0-1 min	

CODE	DESCRIPTION	
03-01-0025	210 KW DISTRIBUTION PUMP POWER CONTROL BOARD	
	RATED VOLTAGE 400V	
	RATED OPERATING CURRENT 37A	
	FREQUENCY 50 Hz	
	CONTROL CIRCUIT VOLTAGE 110V	
03-01-0026	110 KW DISTRIBUTION PUMP CONTROL BOARD	
	110V CONTROL CIRCUIT , 240V HEATER	
03-01-0027	205 KW DISTRIBUTION PUMP CONTROL BOARD	
	110V CONTROL CIRCUIT , 240V HEATER	
03-01-0028	INCOMER CIRCUIT BREAKER 1600 KVA FOR TRANSFORMER T1	
	RATED VOLTAGE 415V	

	FREQUENCY 50 Hz , 3PH CONVENTIONAL Ith 3250 A	
03-01-0029	BUS SUCTION CIRCUIT BREAKER RATED VOLTAGE 415V FREQUENCY 50 Hz , 3PH CONVENTIONAL Ith 3250 A	
03-01-0030	110 KW DISTRIBUTION PUMP POWER CONTROL BOARD RATED VOLTAGE 400V RATED OPERATING CURRENT 200A CONTROL CIRCUIT VOLTAGE 110V	

SECTION 1-1-2:SOUTH RES

CODE	DESCRIPTION	
	SPARES FOR 600/600/600 PUMP	
03-01-0031	THRUST WASHER	
03-01-0032	COMPLET DRIVE SHAFTINGS	
03-01-0033	MOTOR BEARING HOSING	

CODE	DESCRIPTION	
	SPARES FOR 500/500/405 PUMP	
03-01-0034	MOTOR BEARING HOSING	
03-01-0035	CASING RING 2st	
03-01-0036	FLANGE DRIVE SHAFT ITEM 30	
03-01-0037	SLIP JOINT	
03-01-0038	COUPLING FOR PUMP SHAFTING	
03-01-0039	PLUMMER BEARING PACKING	

SECTION 1-1-3: NORTH RES

CODE	DESCRIPTION	
	SPARE PART FOR CAPCITORS	
03-01-0040	FUSE TYPE CEF IN40/UN 7.2 KV	
03-01-0041	FUSE TYPE CEF IN63A/UN 7.2 KV	

CODE	DESCRIPTION	
	SPARE PART FOR GEAR TYPE VS/12	
03-01-0042	C.B 3.3 KV , 500A	
03-01-0043	C.B 520 KW , 150A	
03-01-0044	C.B 380 KW , 100A	
03-01-0045	C.B 275 KW , 80A	
03-01-0046	C.B 100KW ,+B67 200A	

CODE	DESCRIPTION	
	SPARE PART FOR TOP CHANGE OVER FOR TRANSFORMAR 7500	
03-01-0047	STAR RELAY TYPE 14	

SECTION 1-1-4: AL KARKH TREATMENT PLANT

CODE	DESCRIPTION	
	POWER SUPPLY UNIT	
03-01-0048	3.8 A , 240 V AC I/P , 24V DC O/P	
03-01-0049	7.6 A , 240 V AC I/P , 24V DC O/P	
03-01-0050	4.9 A , 240 V AC I/P , 24V DC O/P	
03-01-0051	16 A , 240 V AC I/P , 24V DC O/P	
03-01-0052	2.8 A , 240 V AC I/P , 24V DC O/P	
03-01-0053	5.10 A , 240 V AC I/P , 24V DC O/P	
03-01-0054	5.7 A , 240 V AC I/P , 24V DC O/P	

CODE	DESCRIPTION	
	ULTRA SONIC FLOMETER WITH THE FLOWING SPECIFICATION , CLAMP ON TYPE . FLOW RAT FOR PIPE DIAMETER :	
03-01-0055	2300 MM	
03-01-0056	2100 MM	
03-01-0057	1800 MM	
03-01-0058	450 MM	

CODE	DESCRIPTION	
------	-------------	--

03-01-0059	PUMP COMPLET : Q = 158 L/S ,H= 32m , 1475 rpm , NPSH = 5m , POWER = 75 KW , HORIZONTAL DRIVE = DIRECT HORIZENRAL , 400V , 3PH , 50Hz	
03-01-0060	PUMP COMPLET (WITH ALL SPARE PART) FOR ALUM SOLUTION : Q=2.22 L/S ,H= 34m , 2900 rpm , NPSH = 5m , POWER = 3 KW , SUCTION = 2 IN , DISCHARG = 1.5 IN	
03-01-0061	PUMP COMPLET (WITH ALL SPARE PART) FOR ALUM SOLUTION : Q=3.06 L/S ,H= 10m , 2900 rpm , NPSH = 5m , POWER = 3 KW , SUCTION = 1.5 IN , DISCHARG = 1.5 IN	
03-01-0062	SUBMERSIBLE PUMP FOR ALUM SOLUTION (ST.ST) : 10KW , Q=40L/S , H=14m	
03-01-0063	BOOSTER PUMPS (PRE CHLORINATION) COMPLETE WITH SPARE PART(IMPELLER , SHAFT , BEARINGS) : Q=5.28 L/S , H=85m , 2900 rpm , MOTOR POWER =19.2KW , DRIVE DIRECT (HORIZONTAL)	
03-01-0064	BOOSTER PUMPS COMPLETE WITH SPARE PART(IMPELLER , SHAFT , BEARINGS) : Q=2.5 L/S , H=45m , 2900 rpm , MOTOR POWER =4.2KW , DRIVE DIRECT (HORIZONTAL)	

CODE	DESCRIPTION	
03-01-0065	AIR COMPRESSOR WITH DRIER SINGL STAGE TYPE : 2050 13 CAPACITY EACH : 20 L/S AT 12.5 bar MOTOR : 5.5 KW SPEED : 1440 rpm 400V , 3PH , 50Hz SIZE FROM LENGTH 750mm FROM BALTE TO ANOTHER WIDTH 2340mm SIZE BOLT M15	

TREATED WATER PUMPING STATION

CODE	DESCRIPTION	
03-01-0066	ROTATING DUST SEAL	
03-01-0067	INSULATED THRUST COLLER COMP	
03-01-0068	OIL RETAINING SLEEVE	
03-01-0069	OIL THROWER	

RAW WATER PUMPING STATION

CODE	DESCRIPTION	
	(1000mm PUMP)	
03-01-0070	IMPELLER SHROUD	
03-01-0071	BEARING SPIDER , MATERIAL : C.I. B.S.1452 , GR220	
03-01-0072	BOWL CASING	
03-01-0073	BEARING SPIDER , MATERIAL : C.I. B.S.1452 , GR220	
03-01-0074	BEARING HOUSING (PUMP)	
	(500mm PUMP)	
03-01-0075	SPLIT GLAND	
03-01-0076	PUMP HALF COUPLING	
03-01-0077	MOTOR HALF COUPLING	
03-01-0078	BOWL CASING	
03-01-0079	COUPLING BUSHES	
03-01-0080	CASING EYE RING	

INDUCTION MOTOR

CODE	DESCRIPTION	
03-01-0081	MOTOR TYPE : IS315L IS46LT 6 POLE 140KW , 983 rpm , 400V 3PH , 50Hz VERTICOL NOMBER OF HOLLE 8 SIZE 20mm DIAMETER OF SHAFT : 88.2mm	

LAB. TESTING INSTRUMENT FOR KARKH TREATMENT PLANT

CODE	DESCRIPTION	
03-01-0082	ANALYTICAL WEIGHING BALANCE -SARTORIUS 162 GR RANGE TO 10MG	
03-01-0083	TOP LOADER WEIGHING BALANCE -SARTORIUS 5000G TO 0.01G	

- LOVIBOND COMPARATOR DISCS FOR CHLORINE TEST - DPD 0.1 - 2.00 PPM
- 03-01-008 LOVIBOND COMPARATOR DISCS FOR CHLORINE TEST - FORTHOTOLIDIN 0.15 - 2.00 PPM
- 03-01-0085 PORTABLE PH METER (WTW) PH RANGE - 2.00 - - 6.00 PH TEMP . - 5.0 - - 99.9 °C
- 03-01-0086 WITHSTANDARD PH COMBINATION ELECTRODE LABORATORY PH METER (WTW) PH RANGE - 2.00 - - 6.00 PH TEMP . - 5.0 - - 99.9 °C PH ELECTRODES = 7 TEMP SENSORS = 7
- 03-01-0087 CALIBRATION & MAINTENANCE SUPPLIES PORTABLE CONDUCTIVITY METER (WTW) MEASURING RANGE 0.0 MS /CM - 500 MS /CM TEMP . - 5.0 - - 99.9 °C TDS 0 - - 999 MG /L
- 03-01-0088 STANDARD CONDUCTIVITY CELL LABORATORY CONDUCTIVITY METER (WTW) MEASURING RANGE 0.0 MS /CM - 500 MS /CM TEMP . - 5.0 - - 99.9 °C TDS 0 - - 999 MG /L
- 03-01-0089 STANDARD CONDUCTIVITY CELL U.V. VISIBLE SPECTROPHOTOMETER MODULE WITH EXTERNAL IBM COMPATIBLE COMPUTER RANGE 190 - 900 NM SPECTRAL BAND PASS 10.1 - 2.0 NM SCANNING SPEED : 5 - 7000 NM /MIN DOUBLE BEAM TOW CELL CHAMBER AUTOSIPPER FOR AUTOMATIC SAMPLE INTRODUCTION QUARTZ CELL ATOMIC ABSORPTION FLAME & FURNACE & HYDRIDE SYSTEM FOR MEASURING AG , AL , AU , BA , CD , CO , CR , CU , FE , HG , J , MN , MO , NI , PB , SE , TI , V) 1 - AUTOMATIC FLAME CONTROL 1 - HIGH SPEED FLAME AUTOSAMPLER 1 - FLAME ATOMIZATION SYSTEM 1 - COMPUTER & SOFTWARE & DATA PROCESSING & GRAPHICS 1 - FURNACE ASSEMBLY (3000 °) COOLING WATER REQUIREMENT 1 - INERT GAS REQUIREMENT
- 03-01-0091 1 - HYDRIDE GENERATOR
- POLYCARBONATE HOLDER FOR 47MM DIA MEMBRANE FILTERS
- CAPACITY FUNNEL & TIGHT FITTING LID WITHOUT RECEIVER FLASK FILTRATION AREA 2.5 CM
- 03-01-0092 FLOW RATE 1.790 L VACUUM = 600 ML /MIN PLACE STAINLESS STEEL MANIFOLD
- 03-01-0093 POLYCARBONATE HOLDERS AUTOCLAVED AT 121 °C
- 03-01-0094 RUBBER VACUUM HOSE
- 03-01-0095 WATER TRAP VACUUM VACUUM PUMP 220V 50HZ OIL FREE MEMBRANE MAX VACUUM 90 % @ 100 MBAR 76 TORR 80 W WITH SET OF NEOPRENE MEMBRANE VALVE SPRINGS & NEOPRENE HEAD STEEL
- 03-01-0096 POLYCARBONATE HOLDER FOR 47MM DIA MEMBRANE FILTER
- 03-01-0097 250 ML CAPACITY FUNNEL & RECEIVER WITH TIGHT FITTING LID
- 03-01-0098 HAND VACUUM PUMP WITH GAUGE REACTION FLASK 2 L CAPACITY WITH 9MM O.D PLASTIC HOSE
- 03-01-0099 RIPPLE FOR SAFE CONNECTION OF VACUUM HOSE GRIDDED MEMBRANES STERILE & INDIVIDUALLY PACKED 47MM
- 03-01-0100 DISCS COLONY COUNTER DIGITAL FOR PETRI DISHES UP TO 01100MM WITH NUMERICAL DISPLAY : 3 DIGITS LABORATORY INCUBATOR DIGITAL
- 03-01-0101

- TEMP FROM 5°C - 250°C ±0.25°C
CAPACITY 36 L SHELF POSITION 7
ACCESSORIES : SHELVES & GUIDES
DRYING & STERILIZATION OVENS – DIGITAL
TEMP . FROM + 5° TO 250°C , CAPACITY 36 L , SHELF POSITION 7 , ACCESSORIES : GUIDES 2 SETS=20 & SSHELVES=40
GLASS DRYING OVENS WITH FAN
TEMP FROM 40°C TO 70°C CAPACITY 126 L SHELF POSITION 8
ACCESSORIES :
SAFETY THERMOSTAT
TIMER SWITCH 0 - 120 MIN
TIMER SWITCH 0 - 12 HOUR
SHELF GUIDES × 2
SHELF
- 03-01-0104 WATER BATH WITH DIGITAL CONTROL OF TEMP . & TIME
CAPACITY 12 L TEMP MAX 200°C
ACCESSORIES :
GABLE LID WITH THERMOMETER POSITION HOLE
PERFORATED SHELF COVERS HEATING ELEMENT
FLAT LID WITH CONCENTRIC RINGS OF 05 , 80 , 160 , 316 MM DIA WITH THERMOMETER LOCATION HOLE
SUPPORT FRAME FOR TUBE RACKS
TUBE RACKS VARIOUS TUBE DIA AVAILABLE
NO OF TUBE RACK = 24 TUBE DIA = 20 MM
NO OF TUBE RACK = 36 TUBE DIA = 13 MM
LABORATORY REFRIGERATED CABINET
CAPACITY 500 L TEMP . 4°C DIGITAL TEMP DISPLAY
AIR CIRCULATION , NO DOOR GLASS NO OF SHELVES 5
RECTANGULAR PRECISION HOT PLATE
TEMP FROM 5 TO 200°C , ELECTRONIC DIGITAL CONTROL DISPLAY
REVERSIBLE MAGNETIC STIRRERS
SPEED 100 TO 1100 RPM REVERSE STIRRING MOTION
MAX VOLT = 210 DIGITAL READOUT WITH MAGNETIC STIR PLATE
- 03-01-0108 INSTALLATION
- 03-01-0109 MAGNETIC STIRRER WITH HEATING
TEMP . FROM 50°C TO 300°C , CAPACITY 10 L , CONTROL SPEED 60 – 1600 RPM
ACCESSORIES :
STIR BAR WITH PIVOT RING , TEMP . RESISTANT TO 275°C
7 Ø × 20 MM LONG
8 Ø × 40 MM LONG
OVAL STIR BAR TEMP . RESISTANT TO 275°C
16 Ø × 30 MM LONG
20 Ø × 40 MM LONG
STIR BAR RETRIEVER , LENGTH 280 MM
CONCENTRIC STIR BAR WITH BEAKER COVER RESISTS TEMP . TO 160°C
STIR BAR WITH LID FOR BEAKER VOL 100 – 500 ML LENGTH 32 MM
AUTOCLAVE MANUAL & AUTOMATIC
CAPACITY 75 L CONTROL PANEL SAFETY VALVE SAFETY THERMOSTAT
TEMP 100-134°C
PRESSURE 0 TO 2 BAR
MICROPROCESSOR CONTROL VACUUM SYSTEM PURGE FLOOR STANDING DRY SYSTEM
ACCESSORIES :
STAINLESS STEEL BASKET = Ø 28
THERMOMETER MONITOR
- 03-01-0110 PRESSURE DOOR LOCK SAFETY DEVICE
LABORATORY FLOCCULATE
- 03-01-0111 SPEED 15 - 200 RPM NO OF PLACES 6 WITH 1 L TARS
WATER STILL
DISTILLING CAPACITY 6 L . HOUR
CONDUCTIVITY AT 20°C = 0.3 MS / CM
- 03-01-0112 HARDNESS 0.25 MG NL
MUFFLE FURNACE

- 03-01-0113 TEMPERATURE UP TO 140°C CAPACITY 15 L
CENTRIFUGE WITH DIGITAL SPEED INDICATOR
MAX. VOL. = 400 ML NO. OF TUBES 4 × 100 ML
- 03-01-0114 MAX. SPEED 400 RPM
STERILIZED CONTAINER FOR PIPETTE (STAINLESS STEEL)
Ø 100 MM HEIGHT
- 03-01-0115 130 × 400 MM
PETRI DISHES STERILIZED CONTAINER (STAINLESS STEEL)
Ø 100 MM NO. OF DISHES HEIGHT 100 MM
- 03-01-0116 130 × 18 × 40
MICROSCOPE
HEAD TRINOCULAR EYEPIECE WF 10X (180)
OBJECTIVE PLANACHROMATIC (PL) 4X 10X 40X 100X
TECHNICAL FEATURE BRIGHT FIELD
LIGHT SOURCE TRANS 6V 20W HALOGEN
ACCESSORIES
EYEPIECE WIDE ANGLE LENS WF 5X (SINGLE)
EYEPIECE WIDE ANGLE LENS WF 15X (SINGLE)
EYEPIECE WIDE ANGLE LENS WF 16X (SINGLE)
EYEPIECE WIDE ANGLE LENS WF 10X WITH RETICULE (SINGLE)
EYEPIECE WIDE ANGLE LENS WF 10X WITH POINTER (SINGLE)
CONTRAST PHASE KIT DARK FIELD CONDENSE
MICROGRAPH KIT CAMERA MECHANISM WF 10X VISOR FOR
FOCUS & PHOTOGRAPHIC OBJECTIVE OF 4X ADAPTABLE FOR
- 03-01-0117 CAMERA Ø 35 MM USING UNIVERSAL MOUNT
MOTORIZED CAMERA ATTACHMENT
ADAPTER FOR CCD VIDEO CAMERA
BEAKER LOW FORM WITH SPOUT PYREX GLASS
CAPACITY 25, 50, 100, 250, 400, 600, 800, 1000 ML
- 03-01-0118 BEAKER LOW FORM WITH SPOUT PYREX GLASS
CAPACITY 2000 ML
- 03-01-0119 BEAKER ALL FORM WITH SPOUT PYREX GLASS
CAPACITY 100, 150, 250, 400 ML
- 03-01-0120 Erlenmeyer flasks wide neck PYREX GLASS
CAPACITY 100, 200, 250, 300 ML
- 03-01-0121 Erlenmeyer flasks narrow neck PYREX GLASS WITH
GRADUATION
CAPACITY 100, 250, 300 ML
- 03-01-0122 Erlenmeyer flasks narrow neck PYREX GLASS WITH
GRADUATION
CAPACITY 500, 1000 ML
- 03-01-0123 EVAPORATING DISHES WITH SPOUT PYREX GLASS
CAPACITY 90, 170 ML
- 03-01-0124 WEIGHING BOTTLES WITH GRIP STOPPER
CAPACITY 1.5, 30 ML
- 03-01-0125 WATCH GLASS DISHES WITH FUSED EDGES
Ø 100, 150, 100
Ø 100 WITH LID
- 03-01-0127 Ø 100, 150, 200, 250, 300, 400, 500, 600
LABORATORY BOTTLES BOROSILICATE GLASS WITH DIN THREAD
GRADUATED WITH PIPESCREW CAP & POURING RING
- 03-01-0128 CAPACITY 100, 250, 500, 1000 ML
LABORATORY BOTTLES BOROSILICATE GLASS WITH DIN THREAD
GRADUATED WITH PIPESCREW CAP & POURING RING DARK
- 03-01-0129 CAPACITY 100, 250, 500, 1000 ML
BOTTLES REAGENT WIDE NECK SODA LIME GLASS
- 03-01-0130 CAPACITY 50, 100, 250, 500, 1000 ML
ASPIRATOR BOTTLES NS TABULATED NS STOP COCK NS STOPPER
- 03-01-0131 CAPACITY 5000, 10000, 20000 ML
CENTRIFUGE TUBE CONICAL SODA LIME GLASS
- 03-01-0132 CAPACITY 50 ML
CENTRIFUGE ROUND BOTTOM TUBE BOROSILICATE GLASS
- 03-01-0133 CAPACITY 50, 80 ML
CULTURE TUBE WITH SCREW CAP WITH RUBBER GASKET CAN BE
STERILIZED AT 120°C
- 03-01-0134 Ø 100, 150, 200, 250, 300, 400, 500, 600, 800, 1000
VOLUMETRIC FLASK

- 03-01-0135 CAPACITY 25, 50, 100 ML
VOLUMETRIC FLASK
- 03-01-0136 CAPACITY 200, 250 ML
VOLUMETRIC FLASK
- 03-01-0137 CAPACITY 500, 1000 ML
MEASURING CYLINDER GRADUATED LOW FORM GLASS
- 03-01-0138 CAPACITY 10, 25, 50, 100, 250, 500 ML
MIXING CYLINDERS WITH GLASS STOPPER GLASS
- 03-01-0139 CAPACITY 10, 25, 50, 100 ML
AUTOMATIC BURETTE WITH 2 L RESERVOIR
- 03-01-0140 CAPACITY 25, 50 ML
GRADUATED PIPETTE
- 03-01-0141 CAPACITY 0.5, 1, 2 ML
GRADUATED PIPETTE
- 03-01-0142 CAPACITY 5, 10 ML
GRADUATED PIPETTE
- 03-01-0143 CAPACITY 2.5 ML
GLASS FUNNEL WITH SHORT STEM
D x H = 30 x 55 MM
D x H = 50 x 85 MM
- 03-01-0144 D x H = 70 x 120 MM
- 03-01-0145 FILTER PAPER TYPE GF/C 7 CM (WHATMAN)
- 03-01-0146 FILTER PAPER NO. 1 1 CM (WHATMAN)
- 03-01-0147 FILTER PAPER NO. 40, 1 1 CM (WHATMAN)
- 03-01-0148 FILTER PAPER NO. 42, 1 1 CM (WHATMAN)
- 03-01-0149 CRUCIBLE TONG
- 03-01-0150 BEAKER TONG
DROPPING BOTTLE CLEAR GLASS WITH 6/16 PLASTIC STOPPER &
GLASS PIPETTE
- 03-01-0151 CAPACITY 30, 60, 120 ML
DROPPING BOTTLE CLEAR GLASS WITH GROUND IN SLOTTED
STOPPER
- 03-01-0152 CAPACITY 30, 50, 100 ML
WIDE SCREW NECK REAGENT BOTTLE CLEAR GLASS WITH BLACK
PLASTIC SCREW CAP
- 03-01-0153 CAPACITY 30, 100, 230 ML
- 03-01-0154 HAND BELLOWS FLEXIBLE PLASTIC PUMPING BULB 53 MM
- 03-01-0155 BUNSEN BURNER FOR BUTANE PROPANE GAS
- 03-01-0156 METHYLATE SPIRIT BURNER
- BEAKER POLYPROPYLENE WITH SPOUT
- 03-01-0157 CAPACITY 100, 250, 500, 500 ML
LOVEBOND COMPARATE GLASS CELL SQUARE SECTION OPTICAL
- 03-01-0158 PATH 3.5 MM
NESSLER CYLINDER
- 03-01-0159 CAPACITY 50, 100 ML
CRUCIBLE TRANSLUCENT SILICA WITHOUT LID
- 03-01-0160 CAPACITY 80, 150 ML
CUVETTE
LABORATORY TURBIDITY METER RANGE 0 - 1000 N.T.U. WITH
- 03-01-0161 STANDARDIZATION KIT & TEST CELL
- 03-01-0162 DISCATOR PYREX GLASS WITH PLATE 219 MM DIA
MORTAR & PESTLE, AGATE
- 03-01-0163 CAPACITY : 100 MM x 125 ML
- PORCELAIN DISHES, FLAT BOTTOM, SPOUT GLAZED EXCEPT FOR RIM
- 03-01-0164 CAPACITY : 50, 100 ML
STORAGE BOTTLE WITH STOP COCK TAPS HDPE
- 03-01-0165 CAPACITY : 5, 10, 25 L
STORAGE BOTTLE WITH SCREW CAP LDP
- 03-01-0166 CAPACITY : 50, 100, 250, 500, 1000 ML
WIDE MOUTH BOTTLE, ROUND LDP
- 03-01-0167 CAPACITY : 500, 1000 ML
DIP SAMPLER MADE OF PP
LENGTH 10 MM

- 03-01-0168 200CM Ø2
WASHING BOTTLE (LDPE)
- 03-01-0169 CAPACITY : 500 ML
- 03-01-0170 THERMOMETER -20°C TO 250°C
- 03-01-0171 SAFETY BURNER (ATP), BUTANE GAS PUSH BUTTON IGNITION
LOOP END FOR KOLLE HANDLE, LONG HANDLE 43 MM
- 03-01-0172 LOOP Ø : 3 MM MADE OF IRIDIOPLATINIUM
LABORATORY DISSECTION FORCEPS
[- BLUNT END]
[- CURVED BLUNT END]
- 03-01-0173 HEAD & SPITS PROTECTION PAD GLOVES, FLEXIBLE SILICON
GROOVED SPATULA, FLAT SPOON STAINLESS STEEL (LENGTH 190
MM
- 03-01-0174 FLAT SPOON END SPATULA (STAINLESS STEEL LENGTH 210 MM
- 03-01-0175 CAPS FOR BIOLOGICAL CULTURE TUBES (ALUMINIUM WITH STEEL
SPRING INSIDE (AUTOCLAVED AT 1 BAR)
- 03-01-0176 [- CAPS FOR TUBES Ø 15 - 16 MM, COLOR GOLD & SILVER
CAPS FOR BIOLOGICAL CULTURE TUBES (ALUMINIUM WITH STEEL
SIRING INSIDE (AUTOCLAVED AT 1 BAR)
- 03-01-0177 [- CAPS FOR TUBES Ø 24 - 26 MM, COLOR GOLD & SILVER
BOTTLE TOP DISPENSER WITH DIGITAL VOLUME SETTING, THREAD
Ø 32 MM, 3 THREAD ADAPTERS (A28, S40 & A 45) ONE SECTION TUBE
WITH SCREW ONE DISCHARGE TUBE UNIT
- 03-01-0178 VOLUME 2.0 - 10.0 ML
BOTTLE TOP DISPENSER WITH FIXED VOLUME SETTING, THREAD Ø 32
MM, 3 THREAD ADAPTERS (A28, S40 & A 45) ONE SECTION TUBE
WITH SCREW ONE DISCHARGE TUBE UNIT
VOLUME : 5.0 ML
- 03-01-0179 [- 10.0 ML
- 03-01-0180 SILVER NITRATE (AR)
- 03-01-0181 DPD TABLETS NO. 1
- 03-01-0182 SULFANILAMIDE (AR)
- 03-01-0183 POTASSIUM IODIDE (AR)
- 03-01-0184 ETHANOL ABSOLUTE (99-100%)
- 03-01-0185 SOLOCHROM CYANINE R
- 03-01-0186 SODIUM ACETATE ANHYDROUS (AR)
- 03-01-0187 HYDROXYL AMMONIUM CHLORIDE (AR)
- 03-01-0188 FERRIC CHLORIDE HEXAHYDRATE (AR)
- 03-01-0189 MANGANOUS SULPHATE TETRAHYDRATE (AR)
- 03-01-0190 POTASSIUM THIOCYANATE (AR)
- 03-01-0191 AMYL ALCOHOL (GPR)
- 03-01-0192 PETROLEUM SPIRIT (AR) #0 - 60°C
- 03-01-0193 GRAM'S IODINE STAINING SOLUTION
- 03-01-0194 KOVACS INDOL REAGENT
- 03-01-0195 SODIUM BICARBONATE (AR)
- 03-01-0196 POTASSIUM HYDROGEN DI-IODATE (AR)
- 03-01-0197 ERIOCHROM BLACK T
- 03-01-0198 4-P DIMETHYL BENZALDEHYDE
- 03-01-0199 MUREXIDE
- 03-01-0200 SODIUM SALICYLATE (GPR)
- 03-01-0201 TRI SODIUM CITRATE (AR)
- 03-01-0202 1,1,2-TRICHLOROTRIFLUOROETHANE (AR)
- 03-01-0203 SODIUM HYDROGEN ORTHOPHOSPHATE ANHYDROUS
- 03-01-0204 POTASSIUM HYDROGEN ORTHOPHOSPHATE
- 03-01-0205 HYDROCHLORIC ACID SP.G (1.18) AR
- 03-01-0206 HYDROCHLORIC ACID SP.G (1.16) AR
- 03-01-0207 ACETIC ACID GLACIAL 99.5% GPR
- 03-01-0208 STABILIZING SOLUTION
- 03-01-0209 GLYCEROL GPR
- 03-01-0210 AMMONIA 0.88 25% AR

SECTION 1-1-5: TAJI RES.

CODE	DESCRIPTION	
	SPARE PART FOR PUMPS 300/350/400 D.E.S.C	
03-01-0211	CASING EYE RING SET	
03-01-0212	PLUMMER BLOAKS OF SN213 + 1213	
03-01-0213	THRUST NUT	

03-01-0214	STUD AND THRUST NET FOR SHAFT	
03-01-0215	THRUST WASHERS	

CODE	DESCRIPTION	
	SPARE PART FOR PUMPS 250/252 D.E.S.C	
03-01-0216	CASING EYE RING SET	
03-01-0217	PLUMMER BLOAKS OF SN213 + 1213	
03-01-0218	THRUST NUT	
03-01-0219	STUD AND THRUST NET FOR SHAFT	
03-01-0220	THRUST WASHERS	

SECTION 1-1-6: SPAR PARTS FOR AL- RASHED PROJECT

CODE	DESCRIPTION	
	PUMP TYPE 10LR18A IDP O/N SP1720000 6-08	
03-01-0221	O-RING FOR SLEEV SHAFT	
03-01-0222	V-RING	
03-01-0223	LANTERN RING	
03-01-0224	LOCK NUT	
03-01-0225	SHAFT NUT	
03-01-0226	GLAND RING	
03-01-0227	GLAND	
03-01-0228	STUFFING BOX HOUSING	
03-01-0229	CASING WEAR RING	
03-01-0230	BEARING HOUSING	
03-01-0231	BALL BEARING 6317	
03-01-0232	BALL BEARING 6320	
03-01-0233	BALL BEARING 6319	
	PUMP TYPE 300 LNN 475 IDP SN/SP1720000 6-15	
03-01-0234	O-RING FOR SLEEV SHAFT	
03-01-0235	SHAFT SLEEVE	
03-01-0236	V-RING	
03-01-0237	LANTERN RING	
03-01-0238	LOCK NUT	
03-01-0239	SHAFT NUT	
03-01-0240	GLAND RIN	
03-01-0241	GLAND RIN	
03-01-0242	STUFFING BOX HOUSING	
03-01-0243	CASING WEAR RING	
03-01-0244	BEARING HOUSING	
03-01-0245	BALL BEARING 6322	
03-01-0246	COUPLING	
	PUMP TYPE Q=960 , H=20m , 980 rpm	
03-01-0247	SHAFT	
03-01-0248	IMPLLER	
03-01-0249	WEAR RING	
03-01-0250	COMPLETE ROTATOR CONTIAN : SHAFT , IMPLLER , IMPLLER RING , BALL BEARING , SLEEVE SHAFT	
03-01-0251	SLEEVE SHAFT	
03-01-0252	LOCK NUT	
03-01-0253	GAS GET	
03-01-0254	BALL BEARING	
03-01-0255	O-RING FOR SHAFT SLEEVE	
03-01-0256	BEARING HOUSING	
03-01-0257	SHAFT NUT	
03-01-0258	LANTERN RING	

CODE	DESCRIPTION	
	PUMP TYPE Q=700 , H=16m , 1450 rpm	
03-01-0259	SHAFT	
03-01-0260	IMPLLER	
03-01-0261	WEAR RING	
03-01-0262	COMPLETE ROTATOR CONTIAN : SHAFT , IMPLLER , IMPLLER RING , BALL BEARING , SLEEVE SHAFT	
03-01-0263	SLEEVE SHAFT	
03-01-0264	LOCK NUT	

03-01-0265	GAS GET	
03-01-0266	BALL BEARING	
03-01-0267	O-RING FOR SHAFT SLEEVE	
03-01-0268	BEARING HOUSING	
03-01-0269	SHAFT NUT	
03-01-0270	LANTERN RING	
03-01-0271	BALL BEARING 6318	
03-01-0272	BALL BEARING 6314	

CODE	DESCRIPTION	
03-01-0273	FLOCCULATOR FOR FLOCCULTION TANK LENGTH OF SHAFT 2.90m DIAMETER OF SHAFT 20.5 cm WIDTH OF MIXER 1.5 m 400/230V 2.39 : 2.05 A 900/4 rpm	

CODE	DESCRIPTION	
03-01-0274	CHLORIN GAS DISPENSER CAPACITY : 10 Kg	

SECTION 1-1-7: SPAR PARTS FOR AL- WAHDA PROJECT

CODE	DESCRIPTION	
	PUMP TYPE 8LR20A	
03-01-0275	O-RING FOR SLEEV SHAFT	
03-01-0276	V-RING	
03-01-0277	LANTERN RING	
03-01-0278	LOCK NUT	
03-01-0279	SHAFT NUT	
03-01-0280	GLAND RING	
03-01-0281	GLAND	
03-01-0282	STUFFING BOX HOUSING	
03-01-0283	CASING WEAR RING	
03-01-0284	BEARING HOUSING	
03-01-0285	BALL BEARING 6317	
03-01-0286	BALL BEARING 6320	
03-01-0287	BALL BEARING 6309	
03-01-0288	GAS GET	
	PUMP TYPE 10LR16A	
03-01-0289	O-RING FOR SLEEV SHAFT	
03-01-0290	V-RING	
03-01-0291	LANTERN RING	
03-01-0292	LOCK NUT	
03-01-0293	SHAFT NUT	
03-01-0294	GLAND RING	
03-01-0295	GLAND	
03-01-0296	STUFFING BOX HOUSING	
03-01-0297	CASING WEAR RING	
03-01-0298	BEARING HOUSING	
03-01-0299	BALL BEARING 6317	
03-01-0300	BALL BEARING 6320	
03-01-0301	BALL BEARING 6311	
03-01-0302	GAS GET	

CODE	DESCRIPTION	
03-01-0303	MOTOR 132 KW WIDTH FOR SHAFT 85mm , DIMINSTION 49 x 54 cm	
03-01-0304	BALL BEARING 6318	
03-01-0305	CLORINE SYSTEM LOK	
03-01-0306	MOTOR 37 KW WIDTH FOR SHAFT 60mm , DIMINSTION 46 FOR BALM LONG 41cm FOR BALM WIDTH	

SECTION 1-1-8: SPARE PART FOR RAW WATER STATION

CODE	DESCRIPTION	
------	-------------	--

03-01-0307	COMPLETE RAW WATER PUMPS,TYPE : VERTICAL PUMPS, Q=1m ³ /Sec , 3600 m ³ /h , H = 63m WITH MOTOR POWER = 840 KW , 1000rpm , 11KV .	
03-01-0308	PRESSURE CONTROL VALVE (LIEZIER) 700mm .	
03-01-0309	CHECK VALVE (GUICHON) .	
03-01-0310	COMPLETE COOLING PUMPS WITH MOTOR ,Q = 60m ³ /h H = 20m WITH MOTOR = 5.5 KW , 400V .	
03-01-0311	TEM P4005 A/B RPS3	
03-01-0312	P5005 A/B RPS4 WITH COMPLET SPARE PART FORT BOTH AS FOLLOWS	
03-01-0313	SHAFT	
03-01-0314	IMPELLER	
03-01-0315	SHAFT SLEEVE	
03-01-0316	ROTATING	
03-01-0317	MECHANICAL SEAL SLEEVE	
03-01-0318	STATIONARY RING	
03-01-0319	SET OF COVPLING PADS	
03-01-0320	SET OF BEARING	
	SPARE PART FOR RAW WATER PUMPING STATION , MAIN PUMPS :	
03-01-0321	INTERMEDIATE SHAFT	
03-01-0322	TOP SHAFT	
03-01-0323	SHAFT SLEEVE	
03-01-0324	BAAVING BUSH	
03-01-0325	IMPELLER BEARING SLEEVE	
03-01-0326	ADJUSTING NUT	
03-01-0327	WASHERS (2PER SET)	
03-01-0328	WASHERS FOR BEARING NUT	
03-01-0329	COMPLETE MUFF COUPLING WITH SCREWS	
03-01-0330	IMPELLER (1ST - 2ND)	
03-01-0331	1ST STAGE PUMP BOWEL WITH RING & SCREW	
03-01-0332	2ND STAGE PUMP BOWEL WITH RING & SCREW	
03-01-0333	SET OF RADIAL AND THRUST BEARING	
03-01-0334	IMPELLER SHAFT	
03-01-0335	THRUST BEARING CARRIER (COMPLETE WITH BEARING & WASHERS AND ACCESSORY)	
03-01-0336	BEARING COVER	
03-01-0337	IMPELLER BEARING SLEEVE	
03-01-0338	SHAFT TUNNEL T0 BE (UPPER)	
03-01-0339	GREASE REGULATOR	
03-01-0340	THRWER	
03-01-0341	GLAND FLANGE	
03-01-0342	FOLLOWER , SPLIT	
03-01-0343	SHAFT TUNNEL T0 BE (MIDDLE)	
03-01-0344	SHAFT TUNNEL T0 BE (LOWER)	
03-01-0345	BEARING NUT	
03-01-0346	SCREW FOR ADJUSTING MLT	
03-01-0347	SEPARATION WASHER	
03-01-0348	FILTER 'ISIS H' (DN 50)	
03-01-0349	AXIAL AND RADIAL BEARING FOR MOTOR VF 180 - 27 TYPE RNCB500 2PER SET	
03-01-0350	AXIAL AND RADIAL BEARING FOR MOTOR VF 460 - 31 TYPE RNCB560 2PER SET	
03-01-0351	SPACER RING FOR COUPLING PUMP SIDE	
03-01-0352	LOCATING COLLAR FOR BEARING	
03-01-0353	BEARING ADAPTER SLEEVE	
03-01-0354	BEARING SLEEVE	

CODE	DESCRIPTION	
	SPARE FOR WINFLUX COPLING INCLUDE ;	
03-01-0355	SPNING FOR COUPLING (GRID)	
03-01-0356	SEAD RING	
03-01-0357	HALF COVER	
03-01-0358	GASKET	
03-01-0359	CAP SCREW AND NUTS (COMPLETE FOR EACH)	
03-01-0360	GLAND PACKING	

03-01-0361	SCREW AND MALE FEMALE UNIONS	
03-01-0362	VALVE	
03-01-0363	UNION ELBOW 1/2"	
03-01-0364	UNION FITTING 1 1/2"	
03-01-0365	UNION FITTING 1/2"	
03-01-0366	REDUCED NIPPLE FOR BEARING	
03-01-0367	INTERMEDIATE BEARING	
03-01-0368	TOP BEARING	
03-01-0369	COUPLING RING SPLIT	
03-01-0370	INTER STAGE SLEEVE	
03-01-0371	IMPELLER NUT WITH SCREW	
03-01-0372	STUD	
03-01-0373	NUT	
03-01-0374	SCREW	
03-01-0375	LUBRICATING PIPE FOR IMPELLER	
03-01-0376	REDUCED NIPPLE FOR IMPELLER	
03-01-0377	BELL MOUTH WITH RING & SCREW	
03-01-0378	CASING WEAR RING	
03-01-0379	CONNECTING PIECE	
	START RAW WATER PUMPS ;	
03-01-0380	INTERMEDIATE SHAFT	
03-01-0381	TOP SHAFT	
03-01-0382	IMPELLER SHAFT	
03-01-0383	1ST STAGE IMPELLER	
03-01-0384	2ND STAGE IMPELLER	
03-01-0385	ADJUSTING NUT	
03-01-0386	INTERMEDIATE BEARING SLEEVE	
03-01-0387	IMPELLER BEARING SLEEVE	
03-01-0388	SET OF RADIAL & THRUST BEARINGS (2 PER SET)	
03-01-0389	THRUST BEARING COVER (COMPLETE WITH BEARING & WASHERS AND ACCESSORY	
03-01-0390	BEARING COVER	
03-01-0391	BEARING BUSH	
03-01-0392	COMPLETE MUFF COUPLING WITH SCREWS (2 PER SET)	
03-01-0393	SHAFT SLEEVE	
03-01-0394	WASHERS (2 PER SET)	
03-01-0395	WASHERS FOR BEARING NUT	
03-01-0396	1ST STAGE PUMP BOWEL WITH RING & SCREW	
03-01-0397	2ND STAGE PUMP BOWEL WITH RING & SCREW	
03-01-0398	SHAFT TUNNEL TO BE (UPPER)	
03-01-0399	SHAFT TUNNEL TO BE (MIDDLE)	
03-01-0400	SHAFT TUNNEL TO BE (LOWER)	
03-01-0401	GREASE REGULATOR	
03-01-0402	THROWER	
03-01-0403	GLAND FLANGE	
03-01-0404	FOLLOWER , SPLIT	
03-01-0405	BEARING NUT	
CODE	DESCRIPTION	
03-01-0406	SCREW FOR ADJUSTING NUT	
03-01-0407	SEPARATION WASHER	
03-01-0408	SPACER RING FOR COUPLING PUMP SIDE	
03-01-0409	LOCATING COLLAR FOR BEARING	
03-01-0410	BEARING ADAPTER SLEEVE	
03-01-0411	BEARING SLEEVE	

CODE	DESCRIPTION	
	SPARE FOR WINFLEX COUPLING INCLUDE ;	
03-01-0412	SPRING FOR COUPLING (GRID)	
03-01-0413	SEAL RING	
03-01-0414	HALF COVER	
03-01-0415	GASKET	
03-01-0416	CAP SCREW AND NUTS (COMPLETE) FOR EACH COVER	
03-01-0417	GLAND PACKING	
03-01-0418	SCREW AND MDLE FEMALE UNIONS	

03-01-0419	REDUCED NIPPLE FOR BEARING	
03-01-0420	INTERMEDIATE BEARING	
03-01-0421	TOP BEARING	
03-01-0422	COUPLING RING SPLIT	
03-01-0423	IMPELLER NUT WITH SCREW	
03-01-0424	STUD FOR BELMOUTH	
03-01-0425	NUT	
03-01-0426	STUD FOR BOWEL WITH NUT SCREW	
03-01-0427	LUBRICATING PIPE FOR IMPRLLER	
03-01-0428	REDUCED NIPPLE FOR IMPELLER	
03-01-0429	BELL MOUTH WITH RING & SCREW	
03-01-0430	CASING WEAR RING	
03-01-0431	CONNECTING PIECE	
	BOOSTER PUMPS SPARES ;	
03-01-0432	IMPELLER SHAFT	
03-01-0433	INTERMEDIATE SHAFT	
03-01-0434	TOP SHAFT	
03-01-0435	IMPELLER	
03-01-0436	CASING WEAR RING	
03-01-0437	INTER STAGE SLEEVE OF IMPELLER	
03-01-0438	INTERMEDIATE SOCKET	
03-01-0439	INTER STAGE SLEEVE	
03-01-0440	IMPELLER BEARING	
03-01-0441	INTERMEDIATE BEARING SLEEVE	
03-01-0442	BEARING BUSH	
03-01-0443	NON RETURN VALVE	
03-01-0444	SET OF COUPLING PADS	
	PROBE RESISTANCE FOR MOTOR :	
03-01-0445	PLATINE 100 OHMS AT 0°C , ACCORDING WITH RESSTANCE - TEMPERATURE VARIATION LAW DEFINITED BY THE DIN 43760 NORM ; THERE NOMINAL VALUE BEING 100 OHMS AT 0°C AND 138.5 OHMS AT 100°C .	

CODE	DESCRIPTION	
03-01-0446	COMPLETE COOLING TOWER FOR RAW WATER PUMPING STATION WITH ALL EQUIPMENT INSIDE	

SECTION 1-2: COMPACT UNIT

CONTAINERIZED PREMOUNTED WATER TREATMENT PLANT

03-01-0447 NOS : 10

PLANT CAPACITY 200 m³/hr

ELECTRIC POWER 400 V+ 10% , 50 Hz , 3-PHASE A.C.

RAW WATER PUMPS

03-01-0448 NUMBER : 2

CAPACITY : 260 m³/hr

HEAD : 20m

HORIZONTAL , CENTRIFUGAL END - SACTION TYPE WITH SPEED

1450 rpm , GLAND TYPE

NPS Hr : 2.6 m

FILTER LOADING PUMP

NUMBER : 2

CAPACITY : 200 m³/hr

HEAD : 50m

HORIZONTEL , CENTRFUGAL END SUCTION TYPE WITH SPEED

1450 R.P.M , GLAND TYPE

FLOCCULATION

RETENTION PERIOD NOT LESS THAN 14.5 MINUTES

SEDIMENTATION

HYDRAUTIC SURFACE LOAD : 1.0 m³/m²/h

THICKNESS OF THE TANK PLATE : 6 mm

FILTRATION

FILTRATION VELOCITY NOT MORE THAN : 9.0 m/hr

DRINKING WATER OUTLET PRESSURE : 50 - 60 METER

THICKNESS OF THE FILTER PLATE : 10 mm

THICKNESS OF THE DISHED END OF

FILTERS TO BE : 12 mm
 TESTING PRESSURE : 10 bar

GENERAL

1- THE PREFABRICATED PLANT IS DESIGNED TO PRODUCE POTABLE WATER FROM RIVER , LAKE

THE PLANT IS DESIGNED FOR EXTREMELY EASY ASSEMBLY AND DISASSEMBLY IN REMOTE AREAS , I.E. ALL PROCESS EQUIPMENTS ARE SKID MOUNTED IN CONTAINER UNITS INCLUDING TANKS , PUMPS , FILTERS , HYDROPHORES , ELECTRICAL PANED AND DOSING EQUIPEMENT ARE MOUNTED IN A CONTAINERIZED CONTROL BUILDING THAT IS OPERATIVE AFTER COUNETION OF ELECTRICITY AND WATER

2- THE DRINKING WATER MEETS THE REQUIREMENTS OF THE INTERNATIONAL STANDARDS FOR DRINKING WATER (WORLD HEALTH ORGANISATION)

SECTION 1-3: SUPPLY AND ERECTION OF COMPLETE PASSENGER LIFT , ALL

CODE	DESCRIPTION
03-01-0449	CAPACITY : 20 PERSON , 1500 KG (EACH) MAIN VOLTAGE : 3PH , 400V , 50Hz NO. OF FLOORS : 1 BASEMENT + 1 GROUND + 7 FLOORS SACH LIFT INCLUDES FOLLOWING EQUIPMENT : 1. COMPLETE DRIVING MACHINE ELECTRIC MOTOR AND ALL MACHINE ROOM ACCESSORIES 2. COMPLETE CONTROL PANEL AND COMPLETE WIRING 3. PUSH BUTTON AND INDICATORS (FLOOR + CAR) COMPLETE PASSENGER CAR AND COUNTER WEIGHT AND STEEL WIRES , GUIDE RAILS AND SAFETY SWITCH AND INDICATIONS 4. CAR AND FLOOR DOOR 5. COMPLETE LIFT FURNITURE OF HIGH STANDARD QUALITY SUCH AS INTER PHONE , EXHAUST FANS , MIRRORS EMERGENCY POWER SUPPLY 6. ALL MECHANICAL AND ELECTRICAL PROTECTION NEEDED NOTE : SHAFT , CONTROL ROOM AND SITE DIMENSIONS (CAR , FLOOR DIMEN) CAN BE TAKEN IN DETAILS ON SITE

SECTION 1-4 : BALL BEARING

CODE	DESCRIPTION
03-01-0450	1213 SN
03-01-0451	1216 SN
03-01-0452	6322
03-01-0453	7322
03-01-0454	6315
03-01-0455	7319
03-01-0456	7318
03-01-0457	6303
03-01-0458	6307
03-01-0459	6208
03-01-0460	6205
03-01-0461	6209
03-01-0462	1216
03-01-0463	6318
03-01-0464	1209
03-01-0465	1213
03-01-0466	22216
03-01-0467	RHP6206ZZ
03-01-0468	RHP6208ZZ
03-01-0469	RHP6308ZZ
03-01-0470	SKF6238
03-01-0471	SKF6244
03-01-0472	SKF6230
03-01-0473	SKF6313C3

03-01-0474	SKF23218	
03-01-0475	SKF6318	
03-01-0476	SKF 6315	
03-01-0477	SKF7318B	
03-01-0478	6328	
03-01-0479	6324	
03-01-0480	7307	
03-01-0481	6306	
03-01-0482	6308	
03-01-0483	6310	
03-01-0484	7330	
03-01-0485	NU326	
03-01-0486	NU232	
03-01-0487	6330	
03-01-0488	7322	

SECTION 1-5:SUBMERSIBLE PUMP

CODE	DESCRIPTION	
03-01-0489	SUBMERSIBLE PUMP 1" SINGLE PHASE FOR TREATED WATER WITH STARTER	
03-01-0490	SUBMERSIBLE PUMP 1" SINGLE PHASE FOR RAW WATER WITH STARTER	
03-01-0491	SUBMERSIBLE PUMP 2" SINGLE PHASE FOR TREATED WATER WITH STARTER	
03-01-0492	SUBMERSIBLE PUMP 2" SINGLE PHASE FOR RAW WATER WITH STARTER	
03-01-0493	SUBMERSIBLE PUMP 2" FOR TREATED WATER WITH STARTER THREE PHASE	
03-01-0494	SUBMERSIBLE PUMP 2" FOR RAW WATER WITH STARTER THREE PHASE	
03-01-0495	SUBMERSIBLE PUMP 3" FOR TREATED WATER WITH STARTER THREE PHASE	
03-01-0496	SUBMERSIBLE PUMP 3" FOR RAW WATER WITH STARTER THREE PHASE	
03-01-0497	SUBMERSIBLE PUMP 4" FOR TREATED WATER WITH STARTER THREE PHASE	
03-01-0498	SUBMERSIBLE PUMP 4" FOR RAW WATER WITH STARTER THREE PHASE	
	COMPLETE SPARE PARTS FOR ALL SUBMERSIBLE PUMPS	

SUBMERSIBLE CLEAR WATER PUMP (MOBILE INSTALLATION)

A) SPECIFICATION:

1. SUPPLY OF SUBMERSIBLE PUMP FOR CLEAR WATER WITH VALVE OF THE LIQUID4-10
2. IMPELLER TO BE MADE OF STAINLESS STEEL OR EQUIVALENT
3. SHAFT TO BE MADE OF STAINLESS STEEL
4. THE TEMPERATURE OF PUMPED WATER 60 DEGREE
5. MOTOR SPECIFICATIONS:
 - CLASS OF INSULATION F/H
 - VOLTAGE : 380 V , 50HZ, 3Q
 - VOLTAGE FLUCTUTION: IS IN I 5%
 - CABLE LENGTH : 30 M
6. PROTCTION FUNNTION:
 - HEAT PROTETOR
 - LEAKAGE PROTCTOR
 - OIL-WATER PROB IN CABLE JUMNCTION CHAMBER
 - OIL-WATER PROB IN OIL CHAMBER
 - TEMPERATURE -PROTECTOR IN SHAFT

B)PUMP STARTERS

THE STARTER SHOULD BE WITH FOLLOWING PROTCTIONS
PHASE /SEQUNCE RELAY , OVER TEMP, OVR LOAD ,
MAIN CIRCUIT BREAKER.
ALL NESSESSARY SWITCHES ON/OFF/AUTO & SINGAL
LAMPS (ON ,OFF,TRIP, DRY, HUMID_
FLOOR STANDING CUBICAL FOR THE PUMP STARTER IP 55

FLOAT SWITCHES FOR AUTOMATIC OPERATION & DRY PROTECTION

ACCESSORIES:

- DISCHARGE ELBOW WITH FLANGE
- FLANGE SLEEVE
- DISCHARGE HOSE WITH HOSE CLIPS(L HEAD)
- SKIRT BASE
- CHAIN WITH SHACKLE
- CONTROL PANELS & CONTROL SYSTEM
- CABLE TYPE STARTIN : STAR /DELTA
- WET TRANSPORTABLE
- STRANER

03-01-0499 3 INGH DIAMETER
DN: 80MM
H: 25M Q: 40 M3/H

03-01-0500 2 INGH DIAMETER
DN: 50MM
H: 15 M Q: 30 M3/H

03-01-0501 4 INGH DIAMETER
DSN : 100MM
H: 25M Q :60 M3/H
WITH 20% SPARE PARTS WITH WIERS FOR MOTOR MAINTENANCE

SECTION 1-6: DICTILE IRON FITTING SUITABLE FOR DUCTILE IRON PIPES

CODE	DESCRIPTION
03-01-0502	Ductile iron pipes with normal diameter 1600mm
03-01-0503	Ductile iron pipes with normal diameter 1400mm
03-01-0504	Ductile iron pipes with normal diameter 1200mm
03-01-0505	Ductile iron pipes with normal diameter 1000mm
03-01-0506	Ductile iron pipes with normal diameter 900mm
03-01-0507	Ductile iron pipes with normal diameter 800mm
03-01-0508	Ductile iron pipes with normal diameter 700mm
03-01-0509	Ductile iron pipes with normal diameter 600mm
03-01-0510	Ductile iron pipes with normal diameter 500mm
03-01-0511	Ductile iron pipes with normal diameter 400mm
03-01-0512	Ductile iron pipes with normal diameter 300mm

CODE	DESCRIPTION
03-01-0513	Flange Socket 1600 mm
03-01-0514	Flange Spigote 1600mm
03-01-0515	Collar Ductile 1600mm
03-01-0516	Double socket bend 45°/90°, 1600 for each
03-01-0517	All flange bend 45°/90°, 1600 for each
03-01-0518	All flange equal tee 1600x1600mm
03-01-0519	All socket equal tee 1600x1600
03-01-0520	Socket-flange tee 1600x1600
03-01-0521	Socket-flange tee 1600x1400
03-01-0522	Socket-flange tee 1600x1200
03-01-0523	Socket-flange tee 1000x1000
03-01-0524	Socket-flange tee 1600x900
03-01-0525	Socket-flange tee 1600x800
03-01-0526	Socket-flange tee 1600x700
03-01-0527	Socket-flange tee 1600x600
03-01-0528	Double flange taper 1600x1400
03-01-0529	Double flange taper 1600x1200
03-01-0530	Ditto flange taper 1600x1000
03-01-0531	Flange - socket 1400
03-01-0532	Flange - spigate 1400
03-01-0533	Ductile collar 1400
03-01-0534	Double socket bend 45,90 1400 for each
03-01-0535	All flange bend 45,90 1400 for each
03-01-0536	All flange equal tee 1400x1400
03-01-0537	All socket equal tee 1400x1400

CODE	DESCRIPTION	
03-01-0538	Socket-flange tee 1400x1400	
03-01-0539	Socket-flange tee 1400x1200	
03-01-0540	Socket-flange tee 1400x1000	
03-01-0541	Socket-flange tee 1400x900	
03-01-0542	Socket-flange tee 1400x800	
03-01-0543	Double-flange tapper 1400x1200	
03-01-0544	Double-flange tapper 1400x1200	
03-01-0545	Flange socket 1200	
03-01-0546	Flange spigate 1200	
03-01-0547	Ductile collar 1200	
03-01-0548	Double socket bend (45,90) 1200 for each	
03-01-0549	Double flange bend (45,90) 1200 for each	
03-01-0550	All flange equal tee 1200x1200	
03-01-0551	All socket equal tee 1200x1200	
03-01-0552	Socket-flange tee 1200x1200	
03-01-0553	Socket-flange tee 1200x1000	
03-01-0554	Socket-flange tee 1200x800	
03-01-0555	Socket-flange tee 1200x600	
03-01-0556	Double flange tapper 1200x1000	
03-01-0557	Double flange tapper 1200x800	
03-01-0558	Double flange tapper 1200x600	
03-01-0559	Flange socket 1000	
03-01-0560	Flange spigate 1000	
03-01-0561	Ductile collar 1000	
03-01-0562	Double socket bend (45,90) 1000 for each	
03-01-0563	All flange bend (45,90) 1000 for each	
03-01-0564	All flange equal tee 1000x1000	
03-01-0565	All socket equal tee 1000x1000	
03-01-0566	Socket-flange tee 1000x1000	
03-01-0567	Socket-flange tee 1000x800	
03-01-0568	Socket-flange tee 1000x600	
03-01-0569	Double flange tapper 1000x800	
03-01-0570	Double flange tapper 1000x600	
03-01-0571	Flange socket 900	
03-01-0572	Flange spigate 900	
03-01-0573	Ductile collar 900	
03-01-0574	Double socket bend (45,90) 900 for each	
03-01-0575	Double flange bend (45,90) 900 for each	
03-01-0576	All flange equal tee 900x900	
03-01-0577	Socket-flange tee 900x900	
03-01-0578	Socket-flange tee 900x800	
03-01-0579	Socket-flange tee 900x700	

CODE	DESCRIPTION	
03-01-0580	Socket-flange tee 900x600	
03-01-0581	Double flange tapper 900x1000	
03-01-0582	Double flange tapper 900x700	
03-01-0583	Double flange tapper 900x600	
03-01-0584	Flange socket 800	
03-01-0585	Flange spigate 800	
03-01-0586	Ductile collar 800	
03-01-0587	Double socket bend (45,90,22.5) 800 for each	
03-01-0588	All flange bend (45,90) 800 for each	
03-01-0589	All flange equal tee 800x700	
03-01-0590	All socket equal tee 800x700	
03-01-0591	Socket-flange tee 800x700	
03-01-0592	Socket-flange tee 800x600	
03-01-0593	Socket-flange tee 800x500	
03-01-0594	Socket-flange tee 800x400	
03-01-0595	Socket-flange tee 800x300	
03-01-0596	Double flange tapper 800x700	
03-01-0597	Double flange tapper 800x600	
03-01-0598	Double flange tapper 800x500	
03-01-0599	Double flange tapper 800x400	

03-01-0600	Double flange tapper 800x300	
03-01-0601	Flange socket 700	
03-01-0602	Flange spigote 700	
03-01-0603	Ductile collar 700	
03-01-0604	Double socket bend (90,45) 700 for each	
03-01-0605	All flange bend (90,45) 700 for each	
03-01-0606	All socket equal tee 700x700	
03-01-0607	Socket flange equal tee 700x700	
03-01-0608	Socket flange equal tee 700x600	
03-01-0609	Socket flange equal tee 700x500	
03-01-0610	Socket flange equal tee 700x400	
03-01-0611	Socket flange equal tee 700x300	
03-01-0612	Double flange equal tapper 700x600	
03-01-0613	Double flange equal tapper 700x500	
03-01-0614	Double flange equal tapper 700x400	
03-01-0615	Double flange equal tapper 700x300	
03-01-0616	Flange - socket 600	
03-01-0617	Flange spigate 600	
03-01-0618	Ductile collar 600	
03-01-0619	Double socket bend (90,45) 600 for each	
03-01-0620	All flange bend (90,45) 600 for each	
03-01-0621	All flange equal tee 600x600	

CODE	DESCRIPTION	
03-01-0622	All socket equal tee 600x600	
03-01-0623	Socket flange tee 600x600	
03-01-0624	Socket flange tee 600x600	
03-01-0625	Socket flange tee 600x500	
03-01-0626	Socket flange tee 600x400	
03-01-0627	Socket flange tee 600x300	
03-01-0628	Double flange tapper 600x500	
03-01-0629	Double flange tapper 600x400	
03-01-0630	Double flange tapper 600x300	
03-01-0631	Flange socket 500	
03-01-0632	Hanage spigate 500	
03-01-0633	Ductile collar 500	
03-01-0634	Double - socket bend (90,45) 500 for each	
03-01-0635	All flange bend (20,45) 500 for each	
03-01-0636	All socket equal tee 500x500	
03-01-0637	All flange equal tee 500x500	
03-01-0638	Socket flange tee 500x500	
03-01-0639	Socket flange tee 500x400	
03-01-0640	Socket flange tee 500x300	
03-01-0641	Double flange tapper 500x400	
03-01-0642	Double flange tapper 500x300	
03-01-0643	Flange socket 400	
03-01-0644	Flange spigate 400	
03-01-0645	Double socket bend (90,45) 400 for each	
03-01-0646	All flange bend (90,45,22;5,11,25) 400 for each	
03-01-0647	All socket equal tee 400x400	
03-01-0648	All hanage equal tee 400x400	
03-01-0649	Socket - flange tee 400x400	
03-01-0650	Socket - flange tee 400x300	
03-01-0651	Double flange tapper 400x300	
03-01-0652	Double flange tapper 400x250	
03-01-0653	Flange socket 300	
03-01-0654	Flange spigate 300	
03-01-0655	Ductile collar 300	
03-01-0656	Double socket bend (90,45) 300 for each	
03-01-0657	All flange bend (90,45) 300 for each	
03-01-0658	All flange equal tee 300x300	
03-01-0659	All socket equal tee 300x300	
03-01-0660	Socket - flange tee 300x300	
03-01-0661	Socket - flange tee 300x250	
03-01-0662	Socket - flange tee 300x200	
03-01-0663	Socket - flange tee 300x150	

CODE	DESCRIPTION	
03-01-0664	Double flange tapper 300x250	
03-01-0665	Double flange tapper 300x200	
03-01-0666	Double flange tapper 300x150	
03-01-0667	Repair clamp for ductile pipes of diameter 400mm	
03-01-0668	Repair clamp for asbestos class A pipes of diameter 400mm	
03-01-0669	Repair clamp for asbestos class B pipes of diameter 400mm	
03-01-0670	Repair clamp for asbestos class A pipes of diameter 500mm	
03-01-0671	Repair clamp for asbestos class B pipes of diameter 500mm	
03-01-0672	Repair clamp for asbestos class C pipes of diameter 500mm	
03-01-0673	Repair clamp for ductile pipes of diameter 600mm	
03-01-0674	Repair clamp for asbestos class A pipes of diameter 600mm	
03-01-0675	Repair clamp for asbestos class B pipes of diameter 600mm	
03-01-0676	Repair clamp for asbestos class C pipes of diameter 600mm	

CODE	DESCRIPTION	
	Supply of spigot-socket ductile iron pipes according to ISO 253 STANDARD TYPE k9 with the following specifications: 1- pipes of push-fit joints. 2- length of pipes should be 6 meters. 3- pipes should have spun cement mortar inside lining and outside bitumen coating.	
	SCOPE OF SUPPLY SPUN DUCTILE IRON SPIGOT-SOCKET	
03-01-0677	1- 100mm diameter pipe with rubber joint	
03-01-0678	2- 150mm diameter pipe with rubber joint	
03-01-0679	3- 200mm diameter pipe with rubber joint	
	SUPPLY OF DUCTILE IRON FITTINGS Fittings should be suitable for ductile iron pipes according to ISO 253 STANDARDS with the following specifications: 1- Flanges should be of type NP16. 2- All sockets/joints should be mechanical. 3- Fittings should have inside cement lining & outside bitumen coating. 4- The scope of supply includes all necessary rubber joints, gaskets, washers, bolts, nuts & washers.	
	SCOPE OF SUPPLY	
03-01-0680	1- Flange socket 200 mm	
03-01-0681	2- Flange socket 150 mm	
03-01-0682	3- Flange socket 100 mm	
03-01-0683	4- Flange spigot 200 mm	
03-01-0684	5- Flange spigot 150 mm	
03-01-0685	6- Flange spigot 100 mm	
03-01-0686	7- All socket tee 200 mm	
03-01-0687	8- All socket tee 200x150, 150x100, (each)	
03-01-0688	9- Double socket tee with flange branch 100x100	
03-01-0689	10- Double flange reduce 200x150mm, 150x100, (each)	
03-01-0690	11- Double flange reduce 150x100mm	
03-01-0691	12- All socket tee 100x100	
03-01-0692	13- All socket tee 150x150	
03-01-0693	14- Collar 100 mm	
03-01-0694	15- Collar 150 mm	
03-01-0695	16- Collar 200 mm	
03-01-0696	17- Double socket bend 45, 90 deg. (each), 100mm	
03-01-0697	18- Double socket bend 45, 90 deg. (each), 150mm	
03-01-0698	19- Double socket bend 45, 90 deg. (each), 200mm	
03-01-0699	17- Double socket bend 22 1/2, 1 1/4 (each) 100mm	
03-01-0700	18- Double socket bend 22 1/2, 1 1/4 (each) 150mm	
03-01-0701	19- Double socket bend 22 1/2, 1 1/4 (each) 200mm	
	General specifications 1- Thickness of pipe according to formula $t = 5.8 \sqrt{0.003 \times DN}$ 2- Internal pressure proof test = 50 bars 3- Thickness of fitting according to formula $t = 7 + 0.014 \times DN$ for Tees, $k = 14$	

- Ⓔ- $k=0.012 \times DN$ for other fittings $k=12$
- Ⓕ- Leakage tightness test for fitting = 2.5 bars
- Ⓖ- Thickness of lining = 2.5 mm

SECTION 1-7 : CAST IRON FITTINGS FOR UPVC PIPES

CODE	DESCRIPTION
	Supply of fittings for UPVC pipes according to DIN 8061 & 8062 (class 10 bars) with the following specifications: 1- Fittings should be manufactured from cast iron with epoxy paint internally and externally 2- Flanges should be of type NP16. 3- The scope of supply including all necessary rubber joint, washers, bolts, nuts, gaskets. Scope of supply
03-01-0702	1- All socket tee 110mm x 110mm
03-01-0703	2- All socket tee 160mm x 110mm
03-01-0704	3- All socket tee 160mm x 160mm
03-01-0705	4- All socket tee 225mm x 160mm
03-01-0706	5- All socket tee 225mm x 225mm
03-01-0707	6- Double socket bend 90° 110mm
03-01-0708	7- Double socket bend 90° 160mm
03-01-0709	8- Double socket bend 90° 225mm
03-01-0710	9- Double socket bend 45° 110mm, 160mm (each)
03-01-0711	10- Double socket bend 45° 225mm
03-01-0712	11- Flange spigot & flange socket 110mm each
03-01-0713	12- Flange spigot & flange socket 160mm each
03-01-0714	13- Flange spigot & flange socket 225mm each
	Supply of valves Specifications: 1- Valve should be of rubber disc seal type. 2- Flange should be PN16 type. 3- Testing pressure should be 1.8 bars against seal and 2.5 bars against body. 4- Coating should be of epoxy paint internally & externally. 5- All coating should be of feed stuff quality. Scope of supply
03-01-0715	1- Double spigot valve 110mm
03-01-0716	2- Double spigot valve 160mm
03-01-0717	3- Double spigot valve 225mm

SECTION 1-8 : SADDLES WITH FURREL

CODE	DESCRIPTION
03-01-0718	1-COMPLET SET OF 110MM SADDLE WITH 12MMX12MM FERRULE.
03-01-0719	2- = = = = = 25MMX25MM =
03-01-0720	3- = = = = = 18MMX18MM =
03-01-0721	4- = = 160MM = = 12MMX12MM =
03-01-0722	5- = = = = = 18MMX18MM =
03-01-0723	6- = = = = = 25MMX25MM =
03-01-0724	7- = = 225MM = = 12MMX12MM =
03-01-0725	8- = = = = = 25MMX25MM =

SECTION 1-9 : STAINLESS STEEL CLAMPS

CODE	DESCRIPTION
03-01-0726	STAINLESS STEEL REPAIR CLAMP TYPE RS-1, RANGE MM(115-125)
03-01-0727	STAINLESS STEEL REPAIR CLAMP TYPE RS-1, RANGE MM(112-121)
03-01-0728	STAINLESS STEEL REPAIR CLAMP TYPE RS-1, RANGE MM(166-178)
03-01-0729	STAINLESS STEEL REPAIR CLAMP TYPE RS-1, RANGE MM(178-190)
03-01-0730	STAINLESS STEEL REPAIR CLAMP TYPE RS-1, RANGE MM(215-227)
03-01-0731	STAINLESS STEEL REPAIR CLAMP TYPE RS-1, RANGE MM(233-246)
03-01-0732	STAINLESS STEEL REPAIR CLAMP TYPE RS-1, RANGE MM(271-293)
03-01-0733	STAINLESS STEEL REPAIR CLAMP TYPE RS-1, RANGE MM(346-368)
03-01-0734	STAINLESS STEEL REPAIR CLAMP TYPE RS-1, RANGE MM(369-392)

SUBMERSIBLE CLEAR WATER PUMP (MOBILE INSTALLATION)

A) SPECIFICATION:

1. SUPPLY OF SUBMERSIBLE PUMP FOR CLEAR WATER WITH VALVE OF THE LIQUID4-10

2. IMPELLER TO BE MADE OF STAINLESS STEEL OR EQUIVALENT
3. SHAFT TO BE MADE OF STAINLESS STEEL
4. THE TEMPERATURE OF PUMPED WATER 60 DEGREE
5. MOTOR SPECIFICATIONS:
CLASS OF INSULATION F/H
VOLTAGE : 380 V , 50HZ, 3Q
VOLTAGE FLUCTUTION: IS IN I 5%
CABLE LENGTH : 30 M
6. PROTCTION FUNNTION:
HEAT PROTETOR
LEAKAGE PROTCTOR
OIL-WATER PROB IN CABLE JUM\NCTION CHAMBER
OIL-WATER PROB IN OIL CHAMBER
TEMPERATURE -PROTECTOR IN SHAFT

B)PUMP STARTERS

THE STARTER HAS THE FOLLOWING PROTCTIONS
PHASE /SEQUNCE RELAY , OVER TEMP, OVR LOAD ,
MAIN CIRCUIT BREAKER.
ALL NESSESSARY SWITCHES ON/OFF/AUTO & SINGAL
LAMPS (ON ,OFF,TRIP, DRY, HUMID_
FLOOR STANDING CUBICAL FOR THE PUMP STARTER IP 55
FLOAT SWITCHES FOR AUTOMATIC OPERATION & DRY PROTECTION

ACCESSORIES:

DISCHAGRE ELBOW WITH FLANGE
FLANGE SLEEVE
DISCHARGE HOSE WITH HOSE CLIPS(L HEAD)
SKIRT BASE
CHAIN WITH SHACKLE
CONTROL PANELS & CONTROL SYSTEM
CABLE TYPE STARTIN : STAR /DELTA
WET TRANSPORTABLE
STRIANER

03-01-0735 3 INGH DIAMETER
DN: 80MM
H: 25M Q: 40 M3/H

03-01-0736 2 INGH DIAMETER
DN: 50MM
H: 15 M Q: 30 M3/H

03-01-0737 4 INGH DIAMETER
DSN : 100MM
H: 25M Q :60 M3/H
WITH 20% SPARE PARTS

SECTION 4: WATER TREATMENT PLANTS REQUIREMENT

CODE NO.	DESCRIPTION	
03-01-0738	DUCTILE IRON PIPES (1400-2000)mm DIAMETER WITH FITTINGS	
03-01-0739	BUTERFLY VALVES (1400-2000)mm DIAMETER , ELECTRICALLY AND MANUALLY OPERATED	
03-01-0740	VERTICAL RAW WATER PUMP SET WITH CONTROL PANELS AND VALVES	
03-01-0741	ELECTRIC DISTRIBUTION BOARD FOR RAW WATER PUMPS	
03-01-0742	TRANSFORMRS FOR RAW WATER PUMPING STATION	
03-01-0743	SPLIT CASE VERTICAL PUMPS FOR TREATED WATER WITH CONTROL PANELS AND VALVES	

03-01-0744	ELECTRIC DISTRIBUTION BOARD FOR TREATED WATER PUMPS	
03-01-0745	TRANSFORMERS FOR TREATED WATER PUMPING STATION	
03-01-0746	MAIN SUB STATION FOR THE HEAD WORK	
03-01-0747	GANTRY AND BRIDGE CRANES	