

SECTION 1 : REQUIREMENTS FOR WATER TREATMENT PLANTS AND NETWORKS

SECTION 1-1: SPARE PARTS OF REC.FOR AL KARKH RESER.

CODE	DESCRIPTION	QTY
03-01-00001	SERIAL NO. C5/56408/9 , 800/800/672 D.E.S.C. PUMP , SECTIONAL DRAWING NUMBER P2003141 1- COMPLETE PUMP WITH MOTOR AND SHAFT WITH THE CABLE. 2- MOTOR COOLER PIPE WORK AND PRESSURE SWITCHES 3- MANUAL VALVES WITH HANDLE 4- ELECTRIC VALVE WITH HANDLE 5- ELECTRIC CONTROL BOARD WITH INSTRUMENTS , THE SAME DRAWING 6- MANUAL VALVE (FOR MAINTANCE) 7- PIPES AND VICKING JONSON AND ALL CONNECTIONS ADPATORS 8- REFLUX VALVS , NON RETURN VALVES	1
03-01-00002	SERIAL NO. C5/56429/30 , 600/600/600 D.E.S.C. PUMP , SECTIONAL DRAWING NUMBER P2003141 1- COMPLETE PUMP WITH MOTOR AND SHAFT WITH THE CABLE.. 2- MOTOR COOLER PIPE WORK AND PRESSURE SWITCHES 3- MANUAL VALVES WITH HANDLE 4- ELECTRIC VALVE WITH HANDLE 5- ELECTRIC CONTROL BOARD WITH INSTRUMENTS , THE SAME DRAWING . 6- MANUAL VALVE (FOR MAINTANCE) 7- PIPES AND VICKING JONSON AND ALL CONNECTIONS ADPATORS 8- REFLUX VALVS , NON RETURN VALVES	2
03-01-00003	SERIAL NO. C5/56412 , 500/450/460 D.E.S.C. PUMP , DR 1- COMPLETE PUMP WITH MOTOR AND SHAFT WITH THE CABLE. 2- REFLUX VALVS , NON RETURN VALVES 3- MANUAL VALVES WITH HANDLE 4- ELECTRIC VALVE WITH HANDLE 5- ELECTRIC CONTROL BOARD WITH INSTRUMENTS , THE SAME DRAWING . 6- MANUAL VALVE (FOR MAINTANCE) 7- PIPES AND VICKING JONSON AND ALL CONNECTIONS ADPATORS 8- DR/P62-8/7 MOTOR COOLER PIPE WORK DR (P2003200 , P2003201 , P2003467 , P200362 , P2003466 , P200285 , P2003019 , P2002385 , P2003035)	3
03-01-00004	SERIAL NO. C5/56429/30 , 600/600/600 D.E.S.C. PUMP , SECTIONAL DRAWING NUMBER P2003177 1- ROTATING ELEMENT WITH INDUCTION MOTOR	2
03-01-00005	2- GLAND PACKING 3ST	2
03-01-00006	3- LIMITORG VALVES 900mm , 800mm	10
03-01-00007	4- ACTUATORS	20
03-01-00008	5- O - RING	2
03-01-00009	6- CASING SPACER RING 2ST	10
03-01-00010	7- LINE SHAFT	1
03-01-00011	8- SP1 COATING FOR EACH PUMP	6
03-01-00012	9- VALVES SERIAL NO. C5/56404 , 500/500/450 D.E.S.C. PUMP ,	6
03-01-00013	GLAND PACKING	5
03-01-00014	CASING RING	2
03-01-00015	INDACTION MOTOR	2
03-01-00016	SP1 INTERNAL COATING PER PUMP	4
03-01-00017	DRIVE SHAFTING	1

	SERIAL NO. C5/56475 , DR. P2002552, 250/225 D.E.S.C. PUMP	
03-01-00018	GLAND PACKING 3ST	4
03-01-00019	CASING RING 2ST	2
03-01-00020	INDACTION MOTOR	1
03-01-00021	SP1 INTERNAL COATING PER PUMP	3

CODE NO	DESCRIPTION	QTY
	SERIAL NO. C5/56450/5 , 350/300/429 D.E.S.C. PUMP	
03-01-00022	SHAFT SLEEVES	2
03-01-00023	CASING RING	4 SET
03-01-00024	INDACTION MOTOR	2
03-01-00025	SP1 INTERNAL COATING PER PUMP	2
03-01-00026	SERIAL NO. C5/56450/5 , 350/300/429 D.E.S.C. PUMP	
03-01-00027	SHAFT SLEEVES	1
03-01-00028	CASING RING	1 SET
03-01-00029	INDACTION MOTOR	1
03-01-00030	SP1 INTERNAL COATING PER PUMP	1

SECTION 1-2: RAW WATER PUMPING STATION

CODE	DESCRIPTION	QTY
	(KPS1 , RPS1 , RPS3 , RPS4)+B235	
	SELF ACTUATED CONTROL VALVE DN 500 PN10 DWG NO. 3670 - 00 - 2720 - 4+B44855 - 003	
03-01-00031	O-RING R7 , PART NO. 7,12,13,15	1000 m
03-01-00032	O-RING R71, PART NO. 10	200
03-01-00033	O-RING R37 , PART NO.19	200
03-01-00034	O-RING R22 , PART NO. 23	200
03-01-00035	LIMIT SWITCH (TELEMECANIQUE) , PART NO. 27	250
03-01-00036	PLATE , PART NO. 11	10
03-01-00037	PISTON , PART NO. 9	2
03-01-00038	SEAT , PART NO.8	20
03-01-00039	CYLINDER , PART NO.17	2
03-01-00040	NEEDLE VALVE 1/2" NPT FEMALE , PART NO. 20	200
03-01-00041	DEGASING TRP 1/4" GAS , PART NO. 22	100
03-01-00042	DEGASING TRP 3/8" GAS , PART NO. 28	100
03-01-00043	BALL VALVE 1/2" NPT FEMALE , PART NO. 30	350
03-01-00044	DISC , PART NO. 24	10
03-01-00045	AIR TANK CHAR LATTE 2001+B463 , PART NO. 29	2
03-01-00046	FITTING 1/2" GAS x 1/2" NPT FEMAL , PART NO. 28	100
03-01-00047	FITTING 1/2" GAS FEM x 1/2" NPT FEMAL , PART NO. 42	100
03-01-00048	DOUBLE VALVE 1/2" , PART NO. 43	100
03-01-00049	FITTING 1/2" NPT MALE , PATR NO. 36	100
03-01-00050	TEE 1/2" NPT FEMALE , PART NO. 44	100
03-01-00051	SCREW CHC.M20 - 55 , PART NO. 16	50
03-01-00052	CLIPS , PART NO. 14	10
03-01-00053	FIXING CLIPS SEGMET , PART NO. 31	20
03-01-00054	BOLT HM 8-25 , PART NO. 32	50
	SELF ACTUATED CONTROL VALVE DN 700 PN10 , DISCHARGE PUMPS DWG NO. 3670 - 00 - 2770 - 4 - 55 - 001	
03-01-00055	SEAT , PART NO.90	50
03-01-00056	PISTON , PART NO. 10	2
03-01-00057	O-RING R7 , PART NO. 8,12,14,15	1000m
03-01-00058	O-RING R83, PART NO. 11	100
03-01-00059	PLATE , PART NO. 13	25
03-01-00060	CLIPS , PART NO. 16	20
03-01-00061	SCREW M8-20 , PART NO. 17	25
03-01-00062	FIXING CLIPS SEGMET , PART NO. 18	25
03-01-00063	SCREW CHC.M20 - 60 , PART NO. 19	50
03-01-00064	CYLINDER , PART NO.20	4
03-01-00065	UNION 1/2" NPT MALE , PART NO. 21	10
03-01-00066	O-RING R43, PART NO. 24	50
03-01-00067	O-RING R22, PART NO. 26	100

03-01-00068	DISC , PART NO. 27	25
03-01-00069	AIR TANK CHAR LATTE 3001+B445 , PART NO. 32 VENDOR : GUICHON SA : 73104 ALXLESBAINS :-	2
03-01-00070	COMPLETE CHECK VALVE PN 16 ND500 HOUSING	4
03-01-00071	COMPLETE CHECK VALVE PN 16 ND700 HOUSING SPARE PART FOR THE VALVES ABOVE :-	6
03-01-00072	COVER FOR BOTH SIDE FOR DN700	100
03-01-00073	COVER FOR BOTH SIDE FOR DN500	40
03-01-00074	SCREWS FOR BOTH SIDE FOR DN500	250
03-01-00075	SCREWS FOR BOTH SIDE FOR DN700	100
03-01-00076	DISC RING FOR DN500	20
03-01-00077	DISC RING FOR DN700	100
03-01-00078	RING RETAINING WASHER FOR DN500	50
03-01-00079	RING RETAINING WASHER FOR DN700	100

CODE	DESCRIPTION	QTY
03-01-00080	AXLE FOR DN500	100
03-01-00081	AXLE FOR DN700	10
03-01-00082	FREE AXLE FOR DN500	10
03-01-00083	FREE AXLE FOR DN700	400
03-01-00084	O-RING FOR BOTH SIDE FOR DN500	100
03-01-00085	O-RING FOR BOTH SIDE FOR DN700	500
03-01-00086	OPENING INDICATOR (HANDLE) SHAFT AND LEVER OUTLET FOR DN500	10
03-01-00087	OPENING INDICATOR (HANDLE) SHAFT AND LEVER OUTLET FOR DN700	40
03-01-00088	SCREWS FOR DN500	100
03-01-00089	SCREWS FOR DN700 MECAFRANCE 10/18 RUE DU LANGNE DOC. ZADES BETHUNES BALL VALVES	500
03-01-00090	BALL VALVE RSST FLANGED ENDS PN16 DN2"	50
03-01-00091	BALL VALVE RSST FLANGED ENDS PN16 DN2" REDUCED BORE	50
03-01-00092	BALL VALVE RSST FLANGED ENDS PN16 DN4" REDUCED BORE	30
03-01-00093	BALL VALVE RSST CBB (NPT) DN1" REDUCED BORE SONIC AIR EXHAUST VALVE (ERIKS-S.AR.L)	50
03-01-00094	SONIC AIR EXHAUST VALVE	20
03-01-00095	AIR INLET VALVE PONT-A- MOUSSON S.A 54700 , SERVICES TECHNIQUES BP45	20
03-01-00096	FLOAT VALVE EQUILIBRATED VALVE TYPE 1DN80 (WITH THE FLOAT)	10
03-01-00097	ACTUATED GATE VALVE EURO 16DN200 ERIKS - 52 AVENUE DES FRERES LUMERE	10
03-01-00098	CAST IRON BODY BJ 5156 LENGTH PN16 RF FLANGED. FORGED GATE VALVE AP1 602-800/b DWG. NO. FIG	10
03-01-00099	2519/610 , (1.5")	50
03-01-00100	GLOBE VALVE PN16 DWG. FIG. 3210	10
03-01-00101	FORGED GLOBE VALVE AP1 602-800/b DWG. NO. FIG 2049/650	
03-01-00102	SELF AETUATED CONTRAL VALVE PRESSURE CONTROL VALVE DOWN FLOW STABILISER	
03-01-00103	DN 80-PN16	10
03-01-00104	PRESSURE CONTROL VALVE HEADUP FLOW STABILISER DN 80-PN16	10
03-01-00105	O-RING R21	10 SET
03-01-00106	O-RING R27	10 SET
03-01-00107	O-RING R46	10 SET
03-01-00108	O-RING R38	10 SET
03-01-00109	O-RING R12	10 SET
03-01-00110	AIR TANK CHAR LATTE 18 LITERS	10
03-01-00111	O-RING R22	10 SET
03-01-00112	O-RING R71	10 SET

03-01-00113	O-RING R59	10 SET
03-01-00114	O-RING R52	10 SET
03-01-00115	O-RING R14	10 SET
03-01-00116	SWING CHECK VALVE PN16 DWG.FIG.3403 CODE SB : CCOL HERION	10
03-01-00117	SOLENIOD VALVE 2/2 WAY ND 25	100
03-01-00118	SOLENIOD VALVE ND 40 2/2 WAY LOW VOLTAGE CIRCUIT BREAKER	100
03-01-00119	MG. 630A	5
03-01-00120	RAW WATER FLOW TO NETWORK FULL SCALL 36000 m3/h PC2000	10
03-01-00121	RAW WATER MANIFOLD PRESSURE FULL SCALL 0-100 m.w.c PC2000	10
03-01-00122	RESET TOTAL FLOW UNIT m3 x 100	10
03-01-00123	TOTAL FLOW UNIT m3 x 100	10

SECTION 1-3: SPAR PART FOR CHLORINE GAS SYSTEM FROM PORTER TO KARAMAH & DORA PROJECT

CODE	DESCRIPTION	QTY
03-01-00124	SET CONTAINER ROLLER TRUNNIONS CAPACITY FOR CONTAINER UP TO 1000 Kg .	16
03-01-00125	ANCHOR BOLT M16 x 160 Mu , DIN 529 .	96
03-01-00126	WASHER 17 , DIN 125 .	96
03-01-00127	MANIFOLD 1" WITH 2 CONNECTIONS 1" DIN 11 , LENGTH 1000mm SER. NO. 628 A 1089	4
03-01-00128	MANIFOLD 1" WITH 1 CONNECTIONS 1" DIN 11 , LENGTH 1000mm SER. NO. 628 A 1090	4
03-01-00129	AUX. VALVE 1" - 1" DIN 11 , SER. NO. 125 A 1053 .	24
03-01-00130	SISC 1" , SER. NO. 374 B 1022 .	4
03-01-00131	GASKET 18/11mm , SER. NO. 377 N 1001 .	200
03-01-00132	BALL VALVE DN 25 FOR WELDING , SER. NO. 125A 1091	4
03-01-00133	COPPER CONNECTOR 1.0 m , SER. NO. 628 A 1008 .	16
03-01-00134	AUTOM GAS CHANGE OVER PANEL MEDIUM : CHLORIN , CAPACITY : 60 Kg CL2/h , CONNECTION : 1" DIN 11 , SER. NO.806A1032 .	2
03-01-00135	CONTACT PRESSURE GANGE WITH CONNECTOR , RANGE : 0 - 10 bar	2
03-01-00136	PART NO. 131 C 1019 , SER. NO. ANL 1000 L04 , ANL 1000 KO1 CHLORINE FILTER WITH FLANGES , DN 25 WITH GROOVE AND TONGUE acc. DIN 2512 , SER. NO. 666A1031	2
03-01-00137	FLANGE PAIR FOR WELDING DN 25 , DIN 2635 WITH GROOVE AND TONGUE acc. DIN 2512 WITH SCREWS , HEX NUTS AND GASKETS , SER. NO. 614 L 1166	2
03-01-00138	HEATER 220 V , 50 Hz , 48 w , SER. NO. 677 N 1042 .	2
03-01-00139	CHLORINE GAS REGULATOR , CAPACITY : max. 200 Kg CL2/h FOR WALL MOUNTING WITH GAS PRESSURE GANGE ,SER. NO. 806D190U06	6
03-01-00140	CONTACT PRESSURE GANGE WITH CONSISTING OF EACH 1 CONTACT PRESSURE GANGE 0 - 10 bar 1 WALL MOUNTING BRACKET 1 COPPER CONNECTOR , SER. NO. 630 B 1006 .	4
03-01-00141	STEEL PIPE 1" , 33.7 x 2.6 mm , DIN 2448 .	24 m
03-01-00142	WELDING ELBOW 90 , 1" , 33.7 x 2.6 mm , DIN 2605	6

03-01-00143	ANGLE SEAT VALVE DN 25 , PVC , PTFE , SER. NO. 161 . 300 . 449	12
03-01-00144	CHLORINE GAS DISPENSER: MODEL N 70 C 4400 , TYPE 70 C 4494 ABXX IX2X UXCKD WITHOUT VACUUM REGULATOR CAPPCITY:max.20 Kg CL2/h WITH INTEGRATED CHLOROMATIC VALVE OPERATED FROM SINGAL OF WATER FLOW POWER SUPPLIY : 220 V , 50 Hz , INPUT SIGNAL : 4 - 20 m A METERING RANGE : 1- 20 Kg B64 WITH EJECTOR 806 E 063 U 06 FOR WATER PRESSURE 4.6 bar , BACK PRESSARE 2 bar , WATER FLOW 2.96 L/S , CA. 10.7 m3/h , WIRING DIAGRAM acc. ANL 1000 E 07 .	16
03-01-00145	STRAINER DN 80 , PVC , EPDM WITH SCREEM , ORIFICE 2.2 mm , SER. NO. 161 . 305 . 650	2
03-01-00146	BALL VALVE DN 80 , PVC , EPDM , WITH FLANGES , SER. NO. 161.370.013	2
03-01-00147	ANGLE SEAT VALVE DN 25 , PVC , PE , SER. NO. 161 . 300 . 550	12
03-01-00148	ANGLE CHECK VALVE DN 80 , PVC , EPDM , SER. NO. 161 . 303 . 013	2
03-01-00149	FLANGE ADOPTOR DN 80 , PVC , SER. NO. 721 . 700 . 013	12
03-01-00150	FLANGE DN 80 , PVC SER. NO. 721 . 700 . 013	12
03-01-00151	FLAT GASKET DN 80 , CR , SER. NO. 748 . 400 . 022	12
03-01-00152	UNION DN 50 , PVC SER. NO. 721 . 510 . 110 .	24
03-01-00153	ANGLE SEAT VALVE DN50 , PVC , PTFE , SER. NO. 161 . 300 . 599 .	12
03-01-00154	BALL CHECK VALVE DN 50 , PVC , FPM , SER. NO. 161 . 360 . 036 .	6
03-01-00155	UNION DN 50 , PVC , RITON , SER. NO. 721 . 510 . 110 .	6
03-01-00156	SOLUTION WATER DIFFUSOR DN 50 , PVC , WITH ANGLE SEAT VALVE SER. NO. 806F1023	6
	CODE DESCRIPTION QTY	
03-01-00157	RESIDUAL CHLORINE ANALGZER , CHLORTROL 2" , MODEL D17 K2121CA	2
	CONSISTING OF : PRIMARY UNIT , SECUNDARY UNIT AND CONNECTION CABLE , POWER SUPPLY : 220 V , 50 Hz, OUTPUT SIGNAL : 4 - 20 m A , METERING RANGE : 0 - 2 mg CL2/L+B60 CONNECTION ACCESSORIES WITH PRESSURE READUONG VALVE SER. NO. 614 L 1422	
03-01-00158	SAMPLE LINE COMPLETE FOR LINE > DN 300 , SER. NO.614 L 1153	2
03-01-00159	CHLORINE COMPARATOR LOVIBOND 1000 METERING RANGE :	10
03-01-00160	0.1 - 5 mg CL2/h , SER. NO. 142B1021	
03-01-00161	BREATHING PROTECTION MASK WITH FILTER B IN CARRYING BOX SER. NO.NOVA R A	20
03-01-00162	CHLORINE LEAK DETECTOR , MODEL "CHLORALERT" , POWER SUPPLY : 220 V , 50 Hz , SER. NO. 17 CA1020	2
03-01-00163	SET ACCESSORIES , SER. NO. 614 L 1192	2

03-01-00164	SET SPARE PARTS , SER. NO. 614 L 1193	2
03-01-00165	ALARM HORN 220V , 50 Hz , SER. NO. 151E1001	2
03-01-00166	ALARM RESET COMBINATION , SER. NO. 151 E 1002	2
03-01-00167	TEC DN 20 , PVC , SER. NO. 112 A 1049	2
03-01-00168	PVC - CEMENT 500 cm3 , SER. NO. 141 B 1043	2
03-01-00169	TANK LIFTING BEAM FOR CHLORINE CONTAINER VOLUME 800 L = 1000 Kg CL 2 , SER. NO. 623 A 1058	2
03-01-00170	SPRAY NOZZLE DN 15 , PVC , SER. NO. 130 F 1002	20
03-01-00171	PVC - PIPE 32 x 1.8 , DN 25 , DIN 8061/62	60m
03-01-00172	SHUT - OFF VALVE R 1" WITH LONGER SPINDLE,SER.NO.668A1063	4
03-01-00173	ELBOW DN 25 , PVC , SER. NO. 721.100.108	20
03-01-00174	SOCKET DN 25 , PVC , SER. NO. 721.910.108	12
03-01-00175	TEC , REDUCING DN 25 - 15 - 25 , PVC , SER. NO. 721.200.141	16
03-01-00176	REDUCING BUSH DN 25-15 , PVC , SER. NO. 721.900.342	4
03-01-00177	UNION DN 25 , PVC , SER. NO. 721.510.108	4
03-01-00178	PE - PIPE CLAMP d = 32 mm , SER. NO. 108 A 6004	60
03-01-00179	SCREW 4.5 x 40 , DIN 96	60
03-01-00180	PLASTIC DOWEL S6 , SER. NO. 117 F 6002	60
03-01-00181	FAN , TYPE DZQ 25/4D,CAPACITY:1100 m3/h, MOTOR:400V,3PH, 50Hz	10
03-01-00182	POWER : 55 w , SPEED : 1425 min-1 WITH TROPICAL ISOLATING	10
03-01-00183	DURO - VERS+B114CHLUPKLAPPE AP25	4
03-01-00184	INSPECTION OF ALL PARTS FROM THE UNIT	2

SECTION 1-4: VALVE FOR KARAMAH & DORA FOR FLASH MIXERAND

CODE	DESCRIPTION	QTY
03-01-00185	THREAD SLIDE VALVE (OUTLET) CIRCULAR DIAMETER DN 800 .	8
	COMPLETE WITH SEALING RUBBER : SPINDLE EXTENTION , 3 SPINDLE GUIDEWAYS , MOUNTING AND OPERATING HAND WHEEL , DEPTH OF INSTALLATION 8100 mm MANUFADURE BY SCHMIEDING ARMATUREN .	
03-01-00186	THREAD SLIDE VALVE (EMPTYING IN FLUX CHAMBER) CIRCULAR	2
	DIAMETER DN 200 , COMPLETE WITH SEALING RUBBER , SPINDLE EXTENTION , 4SPINDLE GUIDE WAYS MOUNTINGS AND OPERATING HAND WHEEL : DEPTH OF INSTALLATION 8100 m , MANUFACTURE BY SCHMIEDING ARMATUREN /	
03-01-00187	THREAD SLIDE VALVE (EMPTYING IN FLUX CHAMBER) CIRCULAR	8
	DIAMETER DN 150 , COMPLETE WITH SEALING RUBBER , SPINDLE EXTENTION , 4SPINDLE GUIDE WAYS MOUNTINGS AND OPERATING HAND WHEEL : DEPTH OF INSTALLATION 8075 mm , MANUFACTURE BY SCHMIEDING ARMATUREN .	
03-01-00188	SPECAL KNIFE GATE VALVE DIN 600 WITH HAND WHEEL AND SPINDLE EXTENTION H = 5500 mm .	8
03-01-00189	SPECAL KNIFE GATE VALVE DIN 200 WITH HAND WHEEL .	12
03-01-00190	AUMA MAIN VALVE FOR CLEAR WATER ACTUATORS SA25	4

TYPE MD 90 - 2175 , SA 25 - EC , MOT. Nr 3 - 3080 , 3PH ,
 240/415 V
 2.2 Kw/50 Hz , 2800 min-1 , DALTA/STAR 10.5/6.1 A , S 2 - 10min
 -
 COS 0.64 , VDE 0530/72 - 1S.KI.F.IP67 DEC .

SECTION 1-5: AGITATORS FOR KARAMAH & DORAFLASH

CODE	DESCRIPTION	QTY
03-01-00191	MIXER & ALUM STATION AGITATORS WITH - SPUR - GEAR MOTOR TYPE RG2 - 90 - PL 1200 , 15 Kw , 112 V/min , MANUFACTURE JESSE , PURCHASE ORDER NO. 80/41 , 871/961 - 6226/8 , ORDER NO. R 7984/1+2 .	10
03-01-00192	AGITATORS WITH - SPUR - GEAR MOTOR TYPE RG1 - 80 - PL 1000 , P = 15 Kw , 1400 V/min , PURCHASE ORDER NO. 80/41 , 871/961 - 622618 , MANUFACTURE JESSE , ORDER NO. : R 7984/3,4,5 , FOR MIXERING ALUM STATION	8

SECTION 1-6: CIRCUIT BREAKERS FOR MOTOR STARTER PROTECTION

CODE	DESCRIPTION	QTY
	ELECTRICAL CHARACTERSTICS AS PER IEC 947-2 AND EN.60947-2 400 V, 50 Hz,3 POLE :-	
03-01-00193	80 A , BREAKING CAPACITY 70 KA	100
03-01-00194	100 A , BREAKING CAPACITY 70 KA	100
03-01-00195	160 A , BREAKING CAPACITY 70 KA	100
03-01-00196	250A , BREAKING CAPACITY 70 KA	100
03-01-00197	400 A , BREAKING CAPACITY 150 KA	100
03-01-00198	630 A , BREAKING CAPACITY 150 KA	100
03-01-00199	800 A , BREAKING CAPACITY 70 KA	50
03-01-00200	1000 A , BREAKING CAPACITY 70 KA	50
03-01-00201	1250 A , BREAKING CAPACITY 70 KA	25

NOTE :-
 THEES CIRCUIT BREAKERS SHOULD INCLUDE APROTECTON UNIT TO ROTECT SHORT CIRCUIT , EARTH FAULT , PHASE LOSS EVEN IF ASEPRATE UNIT SHOULD BE PROVIDED .

SECTION 1-7: SPARE PARTS FOR CLORIAN SYSTEM

CODE	DESCRIPTION	QTY
03-01-00202	CU- CONNECTOR , CONNECTOR , FLEXIBLE , CADMIUM PLATED	1000
03-01-00203	CONNECTION : 1" COUPLING NUT LENGTH :-	1000
03-01-00204	2.0 m	50
	1.0 m	
03-01-00205	FISHER & PORTER ANGLE SHUT - OFF VALVE DIN 1.24" w , DOUT 1"	50
03-01-00206	PART NO. 433 A 1022	50
03-01-00207	COUPLING NUT , PART NO. 397 A 1002	50
03-01-00208	ADAPTER , PART NO. 393 B 1045	50
03-01-00209	NIPPLE , PART NO. 360 A 1002	500m
	GASKET , PART NO. 333 C 1006	

F&P MAIN FOLD 1" FOR CHLORINE LIQUID GAS HEADER .
 AUXILLARY CYLINDER VALVE DIN 1" DOUT 1" 125 AICS3
 SUBMERSIBLE MOTOR PUMPS FOR DIRTY WATER
 COMPLETE

WITH :-

1- SUTIBLE CONNECTOR FOR THE OUT LET TO
CONNECT HOSES

2- NON - RETURN VALVE (CHECK VALVE)

3- FLEXIBLE HOSE 25 m WITH CLAMBS

4- STARTER

5- LENGTH OF CABLE 25m

03-01-00210	6- FLOAT	25
03-01-00211	3 PHASE SIZE :-	25
03-01-00212	2"	25
03-01-00213	3"	25
03-01-00214	4"	25
03-01-00215	SINGLE PHASE SIZE :-	
03-01-00216	1"	
03-01-00217	2"	

SECTION 1-8 : B313SPAR PART FOR HYDRULIC PUMPS

MADE BY G.L REXROTH GES. M.B.H.

CODE	DESCRIPTION	QTY
	COMPLET MONTIRET,601V,60 AB 40-01,WITH:1-STK ITEM GLF3-40-1,	
03-01-00218	1-STK ITEM 127 AB 31-21 , 1-STK R 1", 1-STK ITEM 60 AB 40- 20R ,	4
03-01-00219	1-STK ITEM 002 419 .	4
03-01-00220	THEROSTAT AB 31-30	4
03-01-00221	ITEM TYPE 280 AB 31-04	4
03-01-00222	MANOMETER 30 G 10 E 1.0/m	6
03-01-00223	PUMP G2/6 , MOTOR 2.2 Kw	4
03-01-00224	COUPLING KD 24-18/28	4
03-01-00225	ITEM TYPE IPF 2G2/20/06 RA IMSC	4
03-01-00226	E-MOTOR 2.2 Kw , 1450 U/min , 400V , 50 HzIP 44 , V1 .	4
03-01-00227	ITEM TYPE 160/18Lx800 AB 23-10	4
03-01-00228	ITEM TYPE S10A1.0	4
03-01-00229	ITEM TYPE DBDS 6G 10/200	4
03-01-00230	ITEM TYPE DRV 12-1.0/0	4
03-01-00231	MANOMETER 63/160 AB 31/10	8
03-01-00232	MANOMETER DV 8-1.0/05	4
03-01-00233	ITEM TYPE HED 4 OP 10/100 Z 14S	4
03-01-00234	HAND PUMPE 35 AB 42-20	4
03-01-00235	ITEM TYPE SB 210-S A 1.1/112-1	4
03-01-00236	ITEM TYPE SA 10 M 25 T 150/PO4 S 105	20
03-01-00237	ITEM TYPE SEB S	4
03-01-00238	COMPLET MONTIRET,IT. Z- HY 1AW , 4132 - 00 - 04	14
03-01-00239	ITEM TYPE G 341/01 , R 1/4"	14
03-01-00240	ITEM TYPE ZDR 6 DP 2-30/25 Ym	10
03-01-00241	ITEM TYPE Z2 DB 6 VC 2-30/100	10
03-01-00242	ITEM TYPE Z2 FS 6-30	4
03-01-00243	ITEM TYPE NG 6 4 WE 6 D 50/6AG 48N24	40
03-01-00244	ITEM TYPE MS x 160 , T.Nr. 001 120	140
03-01-00245	ITEM TYPE KHB 12 - LR 1-1-2	48
03-01-00246	ITEM TYPE GE 12 - LLR	100
03-01-00247	ITEM TYPE T13 -12-18L	100
03-01-00248	ITEM TYPE 12-L	12
03-01-00249	ITEM TYPE d 12 L	12
03-01-00250	ITEM TYPE m 18-L	80
03-01-00251	ITEM TYPE d 18-L	60
03-01-00252	ITEM TYPE G 18-L	
03-01-00253	ITEM TYPE G 12-L+B320	

SECTION 1-9: SPARE PARTS FOR 7-NISSAN CLARIFIERS

CODE	DESCRIPTION	QTY
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03-01-00254	COMPLETE TIMER , TYPE CHRONO CONTACT 6 WAY NO. 1147 , 240 V , 50 Hz , WITH SPARES FOR 2 YEARS .	10
03-01-00255	FOR VALVE TYPE CP1,150mm DIAMETER DIAPHRAGM REF-0002021 089	120
03-01-00256	SLYDGE BLOW-DOWN SOLENOID VALVES , TYPE V301-U-4,240V,50Hz	30
03-01-00257	CLASS BT (LOW VOLTAGE) , HAND CONTROLLED	
03-01-00258	PARTIALIZATION BOX (COMPLETE),TYPE DE40,WITH SPARES FOR 2 YEARS	30

CODE	DESCRIPTION	QTY
03-01-00259	11 Kv , 630 A , YSF6 CIRCUIT BREAKER .	4
03-01-00260	CLOSING AND TRIPPING COIL FOR ABOVE .	20
03-01-00261	CHARGING MOTOR FOR ABOVE C.B .	10
03-01-00262	VOLTAGE TRANSFORMER FOR SIGNALS AND PROTECTION FOR	4
	MAIN FEEDERS , TYPE Bs 3941 , RATIO 11000/110 , FREG-50 RVF 1.5/30 SEC , IL 28/75 Kv	

SECTION 1-10: SPAR PARTS FOR ALUM DOSING PUMPS

PUMP CODE : MC 112 T 125 E5/Z , PLUNGER LIQUIDEND TYPE

CODE	DESCRIPTION	QTY
03-01-00263	WORM	4
03-01-00264	TANGENTIAL GEAR	4
03-01-00265	CONNECTING ROD	16
03-01-00266	INCLINABLE CRANK	6
03-01-00267	MICRO METER SCREW	2
03-01-00268	CROSS HEAD	4
03-01-00269	PLUNGER	8
03-01-00270	VALVE ASSEMBLY (SUCTION)	8
03-01-00271	VALVE ASSEMBLY (DIS CHARGE)	8
03-01-00272	CLMPING NUT	4
03-01-00273	SPANNER FOR CONNECTING ROD	4

SECTION 1-11: VALVES

CODE	DESCRIPTION	QTY
03-01-00274	MANUALLY OPERATED GATE VALVE , TYPE SR 600 NO.57353, DIAMETER 600 mm , NO. OF HOLES 20 , HOLE DIAMETER 30 mm , FLANGE TO FLANGE 425 mm , FLANGE THICKNESS 30 mm , EXTERNAL DIAMETER 790 mm .	15

SECTION 1-12: SPARE PART LIST FOR GAS DOSING SYSTEM 143-040

Gs 143 , AS PER DRAWING NO. 125 141-000

CODE	DESCRIPTION	QTY
03-01-00275	MEASURING TUBE SUPPORT ITEM (1-1,1-2,1-3,1-4,1-5,1-5-2,1-5-3,1-5-4) PART NO. 12-5138-302P	20
03-01-00276	RATE VALVE , PART NO. 12-5100-203P , ITEM (2-1,2-2,2-3,2-4,2-5,2-6,2-7,2-8,2-9,2-10,2-11,2-12,2-13,2-14,2-15,2-16, 2-17,2-18,2-19,2-20,2-21)	20
03-01-00277	DIFFERENTIAL PRESSUR REGULATOR PART NO. 12-4258-102P, ITEM (3-1 - 3-24)	20
03-01-00278	SERVO MOTOR , PART NO. 12-5022-401P	10
03-01-00279	VACUMMETER , PART NO. 12-5112-302P , ITEM (9-1 - 9-4)	10

SECTION 1-13: SUPPLY PASSENGER LIFTS FOR BWA ADMIN. BULIDING

CODE	DESCRIPTION	QTY
03-01-00280	SUPPLY PASSENGER LIFT GENERAL SPEAFICATION :- 1- THE LIFT CAN CARRY 12 PERSONS OR 900 Kg . 2- MAINS VOLTAGE 3PH , 400V , 50 Hz . 3- NO. OF FLOORS : EIGHT FLOORS . THE LIFT EQUIPMENT ENCLNDES :- a- COMPLETE DRIVING MACHINE . b- COMPLETE CONTROL PANEL AND WIRING . c- PUSH BUTTOM AND INDICATORS . d- COMPLETE CAR AND COUNTER WEIGHT AND STEEL WIRES . e- CAR AND FLOOR DOORS . f- COMPLETE INTER CAN BETWEEN THE CAR , MACHINEROOM , GROUND HOOR , AND ANAINTINANCEE STAFF ROOM .	2
03-01-00281	SUPPLY DRINKING WATER PUMP WITH STARTES GENERAL SPEAFICATION :- a- Q = 50 m3/h b- H = 60 m c- DRIVING MOTOR 400V , 3PH , 50 Hz CARTRIDGE FUSES :-	2
03-01-00282	100 A	100
03-01-00283	63 A	100
03-01-00284	35 A	100
03-01-00285	80 A CONTACTORS GENERAL SPEAFICATION :- 1- RATE VOLTAGE 400V A/C 2- LOD VOLTAGE 220V A/C 3- AC3 4- ITH	100
03-01-00286	32 A	30
03-01-00287	16 A	30
03-01-00288	45 A	10
03-01-00289	60 A	20
03-01-00290	80 A	40

SECTION 1-14: CHLORING LEAK PROTECTION TOOLS

CODE	DESCRIPTION	QTY
03-01-00291	TO BE VSED FOR CHLORINE GAS LEAKEGES IN 1 TON CYLENDIRS INCLUDES MASKS , SUITS , BOOTS , GLOVES , CLAMPS,VAVZVES ... etc	15

SECTION 1-15: SPARE PARTS FOR DOURA & KARAMA PLANT

CODE	DESCRIPTION	QTY
03-01-00292	MONORAIL CRANE LOAD 1.6 TONS , SPAN 5.0m , LIFTING HEAD 5.5m , TRAVELLING HOIST GEAR , OPERATING VELOCITIES AND MOTOR DATAS HOISTING : CA. 5m/MIN , CA. 1.5 Kw - 20% ED MICRO HOISTING : CA. 1.25 m/min , CA. 0.35 0.35 Kw - 10% ED CRAB TRAVELLING : CA. 14m/min , CA. 0.14 Kw - 40% ED OPERATING VOLTAGE 400V +/- 10% , 50 Hz CONTROL VOLTAGE 220 V	2
03-01-00293	MONORAIL CONVEYOR	2

	LOAD 2 TONS , SPAN 6m , LIFTING HEAD 6m , TRAVELLING HOIST GEAR , OPERATING VELOCITIES AND MOTOR DATAS HOISTING : CA. 5m/MIN , CA. 0.5 Kw - 20% ED MICRO HOISTING : CA. 1.25 m/min , CA. 0.13 Kw - 20% ED CRAB TRAVELLING : CA. 21m/min , CA. 0.2 Kw - 40% ED OPERATING VOLTAGE 400V +/- 5% , 50 Hz CONTROL VOLTAGE 220 V TRAVELLING CRANE	2
03-01-00294	LOAD 3.2 TONS , SPAN 7.6 m , LIFTING HEAD 10m , TRAVELLING HOIST GEAR OPERATION VELOCITIES AND MOTOR DATAS HOISTING : CA. 4m/min , CA. 2.8 Kw - 30% ED MICRO HOISTING CA. 0.4m/min , CA. 0.3 Kw - 30% ED CRANE TRAVELLING : CA. 20m/min , CA. 2x0.2 Kw - 100% ED OPERATING VOLTAGE 400V +/- S% , 50 Hz CONTROL VOLTAGE 220 V TRAVELLING CRANE	2
03-01-00295	LOAD 4 TONS , SPAN 7.6 m , LIFTING HEAD 5.5m , TRAVELLING HOIST GEAR OPERATION VELOCITIES AND MOTOR DATAS HOISTING : CA. 5m/min , CA. 4 Kw - 30% ED MICRO HOISTING CA. 0.5m/min , CA. 0.45 Kw - 30% ED CRANE TRAVELLING : CA. 14m/min , CA. 0.45 Kw - 100% ED OPERATING VOLTAGE 400V +/- S% , 50 Hz CONTROL VOLTAGE 220 V	

SECTION 1-16: INDOOR GENERATOR FOR TAJI , ABU GHRAIB RES.

CODE	DESCRIPTION	QTY
03-01-00296	RATED POWER 500KVA FOR CONTINOUS DUTY,400V,3PH,50Hz,1500rpm	2
03-01-00297	RATED POWER 500KVA FOR CONTINOUS DUTY,400V,3PH,50Hz,- 1- THE ENGINE AND THE ALTERNATOR ARE MOUNTED ON AFABRICATED FASE FRAME WITH ANTI VIBRATION MOUNTING. 2- THE SETS AS COMPACT AND FUEL SPECIFICATION 8- THERMOSTATS . 9- THE ALTERNATOR ISOF THE SCREEN PROTECTED REVOLVING FIELED BRUSH LESS TYPE 10- THE OUTPUT VOLTAGE OF THE ALTERNATOR IS MAIN TAINED CONSTANT WITH IN OF +/- 2.5y FROM NO LOUD TO FULL LOAD . 11- TERMINALS PROVIDED ARE FOR 3PHASE FOUR WIRE SYSTEM . 12- POWER FACTOR BETWEEN 0.8 - 1. 13- INSULATED CLASS F . 14- ARANGE OF STANDARD CONTROL EQUIPMENT SUCH AS METERS , SETECTOR SWITCHS , .. Ect . 15- THE ENGINE PROTECTION IN THE FORM OF ALARM AND AUTOMATIC SHUT DOWN EQUIPMENT IN THE EVENT OF LOW OIL, PRESSURE , WATER TEMPERATURE AND OVER SPEED . 16- EXHAUST SYSTEM SUITABLE FOR THE SITE . 17- ENGINE HEATER . 18- STARTER BATTERIES . 19- FUEL CAPACITY 1000 Lid . 20- AUTOMATIC CHANGE OVER . 21- SET OF SPEAR PARTS FOR 5 YEARS :-	2
03-01-00298	a- V-BELTS	20
03-01-00299	b- OIL WATER , FUEL FILTERS	50
03-01-00300	c- AUTOMATIC VOLTAGE REQULATER .	4

03-01-00301	d- ROTATING DIODES (SET)	4
03-01-00302	f- SET OF ENGINE SPARES	2
03-01-00303	g- SET OF SPECIAL TOOLS	2

SECTION 1-17: GENERATING STATIONS FOR RAW WATER PUMPING

CODE	DESCRIPTION	QTY
03-01-00304	SUPPLY AND INSTALATION OF (4) GENERATING STATION TO SUPPLY ELECTRICAL POWER FOR BAGHDAD RAW WATER PUMPING STATION , THE STATION SHOULD INCLUDE :	2
	* GENERATING SETS : POWER = 2.2 MVA , VOLTAGE = 11 KV , ENGINE = DIESEL FULE , COOLING = WATER , STARTING = COMPRESSED AIR	
	* ALL THE NECESSARY ELECTRICAL EQUIPMENT	
	* HIGH TENSION SWITCH BORDS	
	* LOW TENSION SWITCH BORDS	
	* VENTILATORS	
	* D.C. EQUIPMENT	
	* SYNCHRONISING EQUIPMENT	
	* ALL THE NECESSARY MECHANICAL EQUIPMENT	
	* ELECTRICAL COMPRESSOR	
	* DIESEL ENGINE COMPRESSOP	
	* OVER HEAD CRANE	
	* DAILY FUEL TANK FOR 48 HOVR OPERATION	
	* STORAGE TANK FOR 2 WEEKS OPERATION	
	* STEEL STRVCTURE BVILDING SUITABLE FOR THE STATION	
	* ALL THE NECESSARY AOXICLARIES NEEDED FOR THE STATION	

SECTION 1-18: CABLES

CODE	DESCRIPTION	QTY
	MULTICORE , LOW VOLTAGE (0.6/1KV) POWER CABLES , WITH CIRCULAER STRANDED COPPER CONDUETORS , XPLE INSULATED , STEEL WIRE ARMoured , PVC SHEATHED , ACCORDING TO BS 502/83 SPECIFICATION NOMINAL CROSS SECTION NR x mm2 :-	
03-01-00305	4 x 1.5	1000 m
03-01-00306	4 x 2.5	1000 m
03-01-00307	4 x 6	1000 m
03-01-00308	4 x 10	1000 m
03-01-00309	4 x 16	1000 m
03-01-00310	4 x 25	1000 m
03-01-00311	4 x 35	1000 m
03-01-00312	7 x 2.5 (CONTROL CABLES)	500 m
03-01-00313	12 x 2.5 (CONTROL CABLES)	500 m

SECTION 1-19: MOBILE CHLORINEATION SYSTEM

CODE	DESCRIPTION	QTY
03-01-00314	THE SYSTEM INCLUDES THE FOLLOWING ACCESSORIES : 1- TWO CHLORINATORS WALL MOUNTED TYPE ONE DUTY THE OTHER STAND BY CAPACITY OF EACH ONE 10 Kg /h CONSISTING ALL THE CONNECTING PIPES AND FITTINGS , INJECTORS ,MANOMETERS FOR THE GAS AND THE WATER . 2- TWO BOOSTING PUMPS Q =6 m3/h , h = 100 m ONE DUTY AND THE OTHER STAND BY , THESE PUMPS MUST BE CONNECTED TO THE INJECTORS AND THE OTHER SIDE PREPARED TO BE COUNECTED TO THE SOURCC OF THE WATER , THESE PUMPS INVOLVE MANOMETERS TOO .	8

3- a- FLEXIBLE PIPES AND VALVES SUPPLIED TO BE CONNECTED BETWEEN THE CHLORINEATORS AND THE GAS CYLINDERS .
 b- FLEXIBLE HOSE (REINFORCED HOSE) SIZE 1.5" OR 2" WITH ALL THE FITTING TO BE COUNECTED BETWEEN THE INJECTORS AND THE INJECTION POINT (LENGTH 25 m) .
 C- ITEMIZED SPARE PARTS FOR ALL THE EQUIPMENTS MOUNTED INSIDE THE CONTAINER .
 4- ALL A/m ITEMS TO BE MOUNTED INSIDE PORTABLE CLOSED CONTAINER SIZE (2.0m x 2.0 m).
 5- THE CONTAINER INCLUDES THE ADITIONAL ACCESSORIES :
 a- SPECIAL VENTELATOR FOR THE CHLORINE GAS LEAKE .

b- ELECTRICAL BOARD PROTECTED FROM THE EFECT OF CL2 GAS AND INCLUDE 2 STARTERS FOR THE BOOSTING PUMPS AND 1 STARTER FOR VENTELATOR .
 c- LIGHTINGS .
 d- CHLORINE GAS CYLINDER QUANTITY TWO EACH WITH CAPACITY 65 Kg .
 e- CHLORINE GAS LEAK DETECTOR EQUIPPED WITH SOUND AND LIGHT ALARM .

		2	
CODE	DESCRIPTION		QTY
03-01-00315	THE SYSTEM INCLUDES THE FOLLOWING ACCESSORIES :		5

1- TWO CHLORINATORS WALL MOUNTED TYPE ONE DUTY THE OTHER STAND BY
 CAPACITY OF EACH ONE 5 Kg /h CONSISTING ALL THE CONNECTING PIPES AND FITTINGS , INJECTORS ,MANOMETERS FOR THE GAS AND THE WATER .
 2- TWO BOOSTING PUMPS $Q = 4 \text{ m}^3/\text{h}$, $h = 70 \text{ m}$ ONE DUTY AND THE OTHER STAND BY , THESE PUMPS MUST BE CONNECTED TO THE INJECTORS AND THE OTHER SIDE PREPAIRED TO BE COUNECTED TO THE SOURCC OF THE WATER , THESE PUMPS INVOLVE MANOMETERS TOO .
 3- a- FLEXIBLE PIPES AND VALVES SUPPLIED TO BE CONNECTED BETWEEN THE CHLORINEATORS AND THE GAS CYLINDERS .
 b- FLEXIBLE HOSE (REINFORCED HOSE) SIZE 1.5" OR 2" WITH ALL THE FITTING TO BE COUNECTED BETWEEN THE INJECTORS AND THE INJECTION POINT (LENGTH 25 m) .
 C- ITEMIZED SPARE PARTS FOR ALL THE EQUIPMENTS MOUNTED INSIDE THE CONTAINER .
 4- ALL A/m ITEMS TO BE MOUNTED INSIDE PORTABLE CLOSED CONTAINER SIZE (2.0m x 2.0 m).
 5- THE CONTAINER INCLUDES THE ADITIONAL ACCESSORIES :
 a- SPECIAL VENTELATOR FOR THE CHLORINE GAS LEAKE .

b- ELECTRICAL BOARD PROTECTED FROM THE EFECT OF CL2 GAS AND INCLUDE 2 STARTERS FOR THE BOOSTING PUMPS AND 1 STARTER FOR VENTELATOR .
 c- LIGHTINGS .
 d- CHLORINE GAS CYLINDER QUANTITY TWO EACH WITH CAPACITY 65 Kg .

		3	
CODE	DESCRIPTION		QTY

03-01-00316 THE SYSTEM INCLUDES THE FOLLOWING ACCESSORIES : 5

1- TWO CHLORINATORS WALL MOUNTED TYPE ONE DUTY THE OTHER STAND BY CAPACITY OF EACH ONE 2 Kg /h CONSISTING ALL THE CONNECTING PIPES AND FITTINGS , INJECTORS ,MANOMETERS FOR THE GAS AND THE WATER .

2- TWO BOOSTING PUMPS $Q = 2 \text{ m}^3/\text{h}$, $h = 70 \text{ m}$ ONE DUTY AND THE OTHER STAND BY , THESE PUMPS MUST BE CONNECTED TO THE INJECTORS AND THE OTHER SIDE PREPARED TO BE COUNECTED TO THE SOURCC OF THE WATER , THESE PUMPS INVOLVE MANOMETERS TOO .

3- a- FLEXIBLE PIPES AND VALVES SUPPLIED TO BE CONNECTED BETWEEN THE CHLORINEATORS AND THE GAS CYLINDERS .

b- FLEXIBLE HOSE (REINFORCED HOSE) SIZE 1.5" OR 2" WITH ALL THE FITTING TO BE COUNECTED BETWEEN THE INJECTORS AND THE INJECTION POINT (LENGTH 25 m) .

C- ITEMIZED SPARE PARTS FOR ALL THE EQUIPMENTS MOUNTED INSIDE THE CONTAINER .

4- ALL A/m ITEMS TO BE MOUNTED INSIDE PORTABLE CLOSED CONTAINER SIZE (2.0m x 2.0 m).

5- THE CONTAINER INCLUDES THE ADITIONAL ACCESSORIES :

a- SPECIAL VENTELATOR FOR THE CHLORINE GAS LEAKE .

b- ELECTRICAL BOARD PROTECTED FROM THE EFECT OF CL2 GAS AND INCLUDE 2 STARTERS FOR THE BOOSTING PUMPS AND 1 STARTER FOR VENTELATOR .

c- LIGHTINGS .

d- CHLORINE GAS CYLINDER QUANTITY TWO EACH WITH CAPACITY 65 Kg .

e- CHLORINE GAS LEAK DETECTOR EQUIPPED WITH SOUND AND LIGHT ALARM .

4

SECTION 1-20:CHLORINATORS.

CODE	DESCRIPTION	QTY
03-01-00317	EA+B1414HLORINATOR WITH CAPACITY 1000g/h CONSISTS THE FOLLOWING 1- WALL MOUNTED CONTROL UNIT 2- INJECTOR 3- VACCUM AND PRESSURE CONTROL UNITS 4- MANUUAL CONTROL SWITCHOVER VALVE 5- FLEXIBLE CONNECTIONS BETWEEN THE UNITS 6- ALL THE VALVES AND FITTINGS 7- LEAD WASHER 1000 PEC. FOR EACH . 8- SPARE PARTS FOR ALL A/ M ITEMS THE PREFERABLE TYPES WALLACE & TIRNANE AND THE CAPETAL CONTROL .	20
03-01-00318	CALCIUM HAYPOCHLORIDE , POWDER FORM , 50 Kg EACH DRUM HYPOCHLORIDE DOSING PUMPS CAPACITY 15 L/h , $h = 8 \text{ bar}$, MOUNTED ON TANK VOLUME 250 L , THIS TANK INCLUDES :	400
03-01-00319	- ELECTRICAL MIXXER . - DRY RUNNING SENSOR . - FLEXIBLE HOSE (LENGTH 25m) WITH ALL THE FITTINGS AND EJECTION POINTS AND ALSO INCLUDES HOSE WITH STRAINER FOR THE SUCTION SIDE .	20

03-01-00320 ITEMIZED SPARE PARTS FOR ALL ABOVE EQUIPMENTS
 ALUMINUM SULPHATE DOSING PUMPS 30
 CAPACITY : 40L/h , h = 8 bar
 MOUNTED ON TANK VOLUME 250 L , THIS TANK
 INCLUDES :
 - ELECTRICAL MIXXER .
 - DRY RUNNING SENSOR .

- FLEXIBLE HOSE (LENGTH 25m) WITH ALL THE
 FITTINGS AND EJECTION POINTS AND ALSO INCLUDES
 HOSE WITH STRAINER FOR THE SUCTION SIDE .

ITEMIZED SPARE PARTS FOR ALL ABOVE EQUIPMENTS
 SECTION 1-22: UNDER GROUND HORIZONTAL BORING
 HYDRAULIC MACHINE

CODE NO.	DESCRIPTION	QT	UNIT
	SCOPE OF SUPPLY		
03-01-00321	1-HYDRULIC PUMP OF SUFFICIENT CAPACITY MOUNTED ON HEAVY DUTY STEEL FARM	20	NO.
03-01-00322	2-COMPLET SET OF HYDRULIC HOSES&CONECTIONS.	20	SET
03-01-00323	3-HYDRULIC JACK MOUNTED ON HEAVY DUTY STEEL FRAM.	20	NO.
03-01-00324	4-COMPLET SET OF STEEL SHAFTS&BORING HEADPITS OF SIZE,1/2",3/4"1",1 1/2",2". SPECIFICATION 1-RANGE OF BORINGHOLE DIAM.1/2"TO2". 2-MAX.BORING LENGTH 30M.	20	SET
	SECTION 1-23: FERRULES MOUNTED ON SADDEL FOR HDPE PIPE		
	SCOPE OF SUPPLY		
03-01-00325	1-COMPLET SET OF 110MM SADDEL WITH 12MMX12MM FERRULE.	60000	SET
03-01-00326	2- = = = = = 25MMX25MM = .	2000	SET
03-01-00327	3- = = = = = 18MMX18MM =	5000	SET
03-01-00328	4- = = 160MM = = 12MMX12MM =	10000	SET
03-01-00329	5- = = = = = 18MMX18MM =	3000	SET
03-01-00330	6- = = = = = 25MMX25MM =	3000	SET
03-01-00331	7- = = 225MM = = 12MMX12MM =.	5000	SET
03-01-00332	8- = = = = = 25MMX25MM =.	1000	SET
03-01-00333	STAINLESS STEEL REPAIR CLAMP TYPE RS-1, RANGE MM(115-125)	7000	NO.
03-01-00334	STAINLESS STEEL REPAIR CLAMP TYPE RS-1, RANGE MM(112-121)	3000	NO.
03-01-00335	STAINLESS STEEL REPAIR CLAMP TYPE RS-1, RANGE MM(166-178)	2000	NO.
03-01-00336	STAINLESS STEEL REPAIR CLAMP TYPE RS-1, RANGE MM(178-190)	5000	NO.
03-01-00337	STAINLESS STEEL REPAIR CLAMP TYPE RS-1, RANGE MM(215-227)	1000	NO.
03-01-00338	STAINLESS STEEL REPAIR CLAMP TYPE RS-1, RANGE MM(233-246)	3000	NO.
03-01-00339	STAINLESS STEEL REPAIR CLAMP TYPE RS-1, RANGE MM(271-293)	1000	NO.
	STAINLESS STEEL REPAIR CLAMP TYPE RS-1, RANGE MM(346-368)	800	NO.
	STAINLESS STEEL REPAIR CLAMP TYPE RS-1, RANGE MM(369-392)	200	NO.

DUCTILE IRON PIPES DN100,150,200mm

CODE No.	DESCRIPTION	QTY.
03-01-00340	Supply of spigot -socket ductile iron pipes according to ISO 2531 STANDARD,type K9 with the following specifications:	

1-pipes of push-fit joints.

2-length of pipe 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 PIPES

1-100mm diameter pipe with rubber joint.	100000m
2-150mm " " " " " .	50000 m
3-200mm " " " " " .	25000 m

SUPPLY OF DUCTILE IRON FITTINGS

Fittings should be suitable for ductile iron pipes according to ISO 2531 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 bituman coating.

4-The scope of supply include all necessary rubber joint ,gaskits,washers,bolts,nuts&washers.

SCOPE OF SUPPLY

1-Flange socket 200mm	No. 100
2- " " 150mm	No. 250
3- " " 100mm	No. 500
4-Flange spigote200m.	No. 100
5- " " 150mm.	No. 250
6- " " 100mm.	No. 500
7-All socket tee 200mm,150mm,(each)	No.50
8-All " " ,200x150,150x100,(each)	No. 50
9-Double socket tee with flange branch 100x100	" 500
10-Double flange reducer 200x150mm,150x100,(each)	" 50
11- " " " 150x100mm.	" 100
12-Isolating butt.fly valve 200mm,150,125,(each)	" 50
13-Double oriffice air valve 200mm.	" 20
14-Single " " " 125mm.	" 50
15-Collar 100mm.	" 500
16- " 150mm.	" 250
17- " 200mm.	" 100
18-Double socket bend 45,90 deg.(each),100mm.	" 200
19- " " " " " " " ,150mm.	" 100
20- " " " " " " " , 200mm.	" 50

21-	"	"	"	22 1/2,11 1/4 (each)	100mm	"	100
22-	"	"	"	"	"	"	50
23-	"	"	"	"	"	"	25

SUPPLY OF BUTTERFLY VALVS

- 03-01-00341 1-Valve should be of rubber disc seal type.
 2-Flange should be PN16 type.
 3-Testing pressure should be 18 bars agenst seal & 25 bars agenst body.
 4-Water tiagtness should be complet between gearbox &body.
 5-Coating should be of epoxy paint internaly&externaly
 6-All coating from inside should be of foodstuff quality.

SCOPE OF SUPPLY

1-Butterfly valves diam.	400mm.	"	25
2- "	"	"	25
3- "	"	"	15
4- "	"	"	15
5- "	"	"	15
6- "	"	"	10
7- "	"	"	10

SECTION 1-24: MOBILE WORKSHOPE FOR PIPEFEATURE REPIARS

SCOPE OF SUPPLY

- | | | | |
|-------------|---|----|-----|
| 03-01-00342 | 1-9000KG TRUK WITH FOUR SEATS CAB &REAR BOX.
SPECIFICATION
*FOUR STROKS,SIX CYLINDER IN LINE,WATER COOLED,TURBOCHARCHED,INTER-COOLED DIRECTLY INJECTION DIESEL ENGINE.
*WHEEL:11.00R20,TYRE WITH RIM:8.00-20.
*ELECTRICAL SYSTEM:24V.
*CLUTCH:DRY TYPE | 4 | NO. |
| 03-01-00343 | 2-4KVA GENERATOR(STATIONARY) WITH ALL NECESSARY WIRING AND FIVE SOCKETS(PLUGS SUPPLIED).
SPECIFICATIONS
*4 STROKE PETROL ENGINE.
*SINGEL PHASE OF 240V OUTPUT.
*RUNNING TIME ON FULL TANK'4HOURS.
*SELF STARTING ENGINE. | 4 | NO. |
| 03-01-00344 | 3-HALOGEN LIGHTS.
SPECIFICATIONS
*150WATTS,240V TYPE.
*BULBS OF QUARTZ HALOGEN.
*CAST ALUMINIUM LAMP HOUSING &STEEL PROTECTION GRILL.
*TRIPOD STAND EXTENDED UP TO 2 METERS HIGHTS.
*CABLE LENGTH 5 METERS. | 16 | NO. |
| 03-01-00345 | 4-CABEL REEL.
SPECIFICATIONS
*REEL OF METAL TYPE 240V.
*CABLE LENGTH 50 METERS OF 1.5MM SQ.. | 4 | NO. |

03-01-00346	5-500 LITERS WATER TANK WITH BOOSTER PUMP OF 12MM OUTLET AND 0.5- CU.M/HR FLOWRATE,8 BARS HEAD,WITH ALL NECESSARY CONNECTIONS,25M-HIGH PRESSURE HOSE.	4	NO.
03-01-00347	6-HAND TOOLS. *ROUNDED MOUTH SHOVEL'HARDWOOD SHAFT,BLADE DEPTH 320X267MM W-HANDEL	40	NO.
03-01-00348	*PICKAXE HEAD CHISEL AND POINT 3.2KG WITH HARDWOOD SHAFT.	40	NO.
03-01-00349	*CROWBAR (1500MM) CHISEL AND POINT.	8	NO.
03-01-00350	*10 LB HAMMER WITH HARDWOOD(800MM)HANDEL.	8	NO.
03-01-00351	*COMPLET SET OF OPENED SPANNERS 19MM TO 40MM.	4	SET
03-01-00352	* = = RING =, = = .	4	SET
03-01-00353	* = = WRENCH = (8" TO 36").	4	SET
03-01-00354	7-WORKING CLOTHES (HEAVY DUTY)WITH RUBBER BOOT.	40	NO.
03-01-00355	8.2"TRASH PUMP.WITH INTAKE HOSE,STRIANER,CONNECTION. SPECIFICATIONS *4 STROKE PETROL ENGINE. *SILCON CARBIDE MECHANICAL SEAL. *HI-CHROME CAST IRON IMPELLER. *CAST ALUMINIUM OUTER CASING AND CAST IRON INNER CASING. *PUMP/ENGINE SHOULD BE MOUNTED ON HEAVY DUTY STEEL FRAM WITH ANTI VIBRATION DVICE IN BETWEEN. *SELF PRIMING ENGINE.	8	NO.