POTABLE WATER TREATMENT STATION

DESCRIPTION

NEVER USED, NEVER ASSEMBLED – This Potable Water Treatment System is skid mounted and permanently housed in (1) air conditioned 40' HC Container and its MCC/PLC Panel is permanently housed in an air conditioned 20' Container.

Main components of the system includes the following items **(See detailed equipment list attached for more details):**

- *Well Water Tank*
- Sand Filter
- Backwash Reject Tank
- Potable Water Tank
- Static Mixers
- Ca(CIO)2 Dosing Unit
- Flocculant Dosing Unit
- Chiller
- Heat Exchanger
- Carbon Filter
- Container buildings
- MCC / PLC Control System
- Multiple Pumps and Valves
- Polypropylene Piping, Fittings
- SS304 Piping and Fittings
- Platform, Handrails, Stairs and Ladders

I.D.	
OEM	PACT Environmental Tech. Co. Lt.
YOM	2013
Location	Indoor Warehouse Dunkirk, France
Condition	NEVER USED
Packaging	Container Mounted

	SPECIFICATIONS
Normal Flow Rate	4.5 m3/h
Design / Day	100 m3/h
Potable Water Distribution	16 / 20 m3/h
Design Temp	< 30 °
pH @ 25 °	6.5 – 8.5
Well Water Tank	50 m3
Motors	400 V / 50 Hz

APPENDIXES ATTACHED

- APPENDIX A
  Detailed Equip. List
- APPENDIX B
  Equip. Data Sheets
- APPENDIX C
  Motor Data Sheets

POTABLE WATER TREATMENT STATION

DESCRIPTION – PROCESS OVERVIEW

The main process steps are:

Well water is pumped into a buffer storage tank (Well Water Tank), it is pumped by means of a water treatment feed pump and passes through the sand filter (media: silica + anthracite – 1m depth) to remove suspended particles. An injection of flocculant of 10- 15% (dosage of 30ppm) is added via flow meter with automatic adjustable stroke to improve flocculation of suspended solids.

Calcium Hypochlorite (delivered as a powder – Diluted in the storage tank) is injected in proportion to the filtrated water inlet flow rate to ensure a good disinfection in the Potable Water Tank. (> 10% efficient chlorine). The Ca(ClO)2 injection, can also be replaced by Na(ClO)2.

Potable Water Tanks with connecting piping on the bottom are to receive and store the treated potable water. Potable water distribution is ensured by Potable Water Feed Pumps which have variable speed motors. A recycling line is provided, suitable to ensure minimum flow rate of the distribution pump. Downstream to the Potable Water Tanks, there is one activated carbon filter to eliminate the free chlorine dosed in excess in the Potable Water Tanks (contact time = 5 minutes). On a time basis (typically every 2 weeks), activated carbon filters are backwashed manually.

For distribution, Calcium Hypochlorite is injected at 0.3 ppm Cl2 to ensure protection of the network. This injection is monitored and controlled by a free Cl2 analyzer installed downstream from the activated carbon filter. A potable water-cooling system is included to cool and maintain the drinkable water at a temperature that is suitable for human consumption.

There is a backwash water tank for the Sand filter and activated carbon filter backwash water collection. This tank will be evacuated by means of Backwash Reject Water submersible pumps

APPENDIX A

POTABLE WATER TREATMENT PLANT

DETAILED EQUIPMENT LIST

PACT	EQUIPMENT LIST	PO Name:Potable Water Treatment 9310-GP-1100					Rev: D	
		Drawing Ref.: PACT-2010-NE009-A0104					Date:20-July-2011	

Item	Tag No.	Major Equipment/Structure	Type	Qty.	Specification	Manufacturer	Origin	LOCATION	Remark
1		**Well Water Tank**							
1.1	9310-TK-1100	Well Water Tank		1	Effective volume 50 m^3; Dimension: Φ3,600x5,200mm(H); FRP ;Insulated with polyurethane+SS304 jacket;on concrete slab(elevation +0.300m)	Huitong	China	Outdoor	One in service
1.2	9310-PU-1110	Water Treatment Feed Pump	4HMS5T	2	Centrifugal pump, 5.02m^3/h @ 22.1m, 400V/50Hz-0.55KW-IP55, Pump body: SS316L; 2,705rpm	ITT Lowara	China	On 40' high cube container	One in warehouse
1.3	9310-PU-1120	Filling Truck Network Feed Pump	SHE40-160/40	2	Centrifugal pump, 34.6m^3/h @ 27.5m, 400V/50Hz-4KW-IP55, Pump body: SS316L; 2,905rpm	ITT Lowara	China	On 40' high cube container	One in warehouse
2		**Sand Filter**							
2.1	9310-FL-1200	Sand Filter		1	Capacity 4.5m^3/h,filtering velocity:9.0m/h; Dimension: Φ 800×2,430 mm(H), carbon steel vessel with rubber liner inside, Media: silica sand ; Media depth:1m,diameter of particles:0.5~0.8mm	PACT	China	On 40' high cube container	
2.2	9310-PU-1210	Backwash Pump	SHE40-160/30	2	Centrifugal pump, 30.5 m^3/h @ 23.8m, 400V/50Hz-3KW-IP55, Pump body: SS316L; 2,885rpm	ITT Lowara	China	On 40' high cube container	One in warehouse
2.3	9310-BL-1220	Air Scour Blower	DBS575	2	Centrifugal blower with silencers and inlet filter, 85Nm^3/h@44.1kPa, 400V/50HZ-7.5KW-IP55; Material : Die cast aluminium;2900rpm	Sjerp&Jongenee	Holand	On 40' high cube container	One in warehouse
2.4	9310-TK-1250	Backwash Reject Water Tank		1	Effective volume 10 m^3; Dimension: Φ2,800x1,900mm(H); FRP ; Insulated with polyurethane+SS304 jacket; on concrete slab(elevation +0.300m)	Huitong	China	Outdoor	
2.5	9310-PU-1240	Backwash Reject Water Pump	CA120/33	2	Centrifugal pump, 5.29m^3/h @ 33.6m, 400V/50Hz-1.1KW-IP55, Pump body: SS304; 2,825rpm; On concrete slab(elevation +0.300m)	ITT Lowara	China	Outdoor	One in warehouse
3		**Potable Water Tank**							

PACT	EQUIPMENT LIST	PO Name:Potable Water Treatment 9310-GP-1100					Rev: D	
		Drawing Ref.: PACT-2010-NE009-A0104					Date:20-July-2011	
Item	**Tag No.**	**Major Equipment/Structure**	**Type**	**Qty.**	**Specification**	**Manufacturer**	**Origin**	**LOCATION**	**Remark**
3.1	9310-TK-1300-A/B	Potable Water Tank		2	Effective volume 50 m^3; Dimension:Φ3,600x5,200mm(H); FRP; Insulated with polyurethane+SS304 jacket	Huitong	China	Outdoor	Two in service
3.2	9310-PU-1310	Chiller Feed Pump	4HMS4T	2	Centrifugal pump, 6.21m^3/h @12.8m, 400V/50Hz-0.45KW-IP55, Pump body: SS316L; 2,720rpm	ITT Lowara	China	On 40' high cube container	One in warehouse
3.3	9310-ZM-1320	Static Mixer		1	Material :PP; DN40	PACT	China	On 40' high cube container	On line
4	**9310-GP-1330**	**$Ca(ClO)_2$ Dosing Unit**		1					
4.1	9310-TK-1331	$Ca(ClO)_2$ Solution Storage Tank	MCL-200	1	Effective volume 200L; Dimension:Φ600x1,100mm(H); HDPE with retention	Allibert	China	On 40' high cube container	
4.2	9310-MX-1332	Ca(ClO)2 Solution Mixer		1	Vertical mixer, CS with rubber liner; 292rpm; 400V/50Hz-0.18kW-IP55; Insulation class / Temperature rise: F/B	Yangtse	China	On 40' high cube container	
4.3	9310-PU-1335	Drum Pump for $Ca(ClO)_2$ and Flocculant	PFP-40-M5	1	Potable drum pump, material: PP, 1.5m^3/h@1.5bar;10000rpm; 230v/50HZ-0.64kw	FTI	USA		
4.4	9310-PU-1333/1334A/1334B	$Ca(ClO)_2$ Dosing Pump	P766-363SI	3	7.6L/h @ 3.5bar, Automatic adjustable; 230V/50Hz-29W-IP65;Pump head: PVDF; Diaphragm pump	Milton Roy	China	On 40' high cube container	One in warehouse
5	**9310-GP-1160**	**Flocculant Dosing Unit**		1					
5.1	9310-TK-1161	Flocculant Storage Tank		1	Effective volume 200L; Dimension:Φ600x1,100mm(H); HDPE with retention	Allibert	China	On 40' high cube container	
5.2	9310-MX-1162	Flocculant Mixer		1	Vertical mixer, CS with rubber liner; 292rpm; 400V/50Hz-0.18kW-IP55 ;Insulation class / Temperature rise: F/B	Yangtse	China	On 40' high cube container	
5.3	9310-PU-1163	Flocculant Dosing Pump	P766-363SI	2	7.6L/hr @ 3.5bar, automatic adjustable; 230V/50Hz-29W-IP65;Pump head: PVDF; Diaphragm pump	Milton Roy	China	On 40' high cube container	One in warehouse
6	**9310-GP-1340**	**Chiller**							

PACT	EQUIPMENT LIST	PO Name:Potable Water Treatment 9310-GP-1100					Rev: D	
		Drawing Ref.: PACT-2010-NE009-A0104					Date:20-July-2011	

Item	Tag No.	Major Equipment/Structure	Type	Qty.	Specification	Manufacturer	Origin	LOCATION	Remark
6.1	9310-CO-1341	Chiller	30RB060	1	Flow rate: 9.5m3/h;Cooling capacity: 55.8KW@45℃; Outdoor type 400V/50HZ Total compressor power: 24.8Kw; Total fan motor power: 0.67Kw;pump power: 1.31Kw; Total unit power: 26.7Kw	Carrier	China	Outdoor	Under shelter
6.2	9310-HX-1342	Heat Exchanger	M6-MFM	1	Plate heat exchanger, SS316 food grade, hot side capacity 6m^3/h from 28 to 18.4 ℃	Alfa Laval	China	On 40' high cube container	
7		**Carbon Filter**							
7.1	9310-FL-1420	Carbon Filter		1	Capacity 20m^3/hr, Dimension: Φ1,400mm×2,540mm(H), Carbon steel vessel with rubber liner inside, Media: activated carbon;Media depth:1m;diameter of particles:0.8~1.2mm	PACT	China	On 40' high cube container	
7.2	9310-ZM-1410	Static Mixer		1	Material :PP DN150	PACT	China	Outdoor	On line
7.3	9310-PU-1400-A/B	Potable Water Feed Pump	SHS40-200/55	2	Centrifugal pump, 20.5m^3/h @ 45.4m, 400V/50Hz-5.5KW-IP55; Pump body: SS316L; 2900rpm;Variable speed motor	ITT Lowara	China	On 40' high cube container	
8		**Skid/Skid House**							
8.1		Skid House		1	40' high cube container-sized skid house with air conditioner to hold treatment unit equipment. Carbon steel with epoxy painted.	PACT	China		
8.2		MCC/PLC Room		1	20' Cube Container-sized skids house with air conditioner to hold MCC/PLC panel and storage room.	PACT	China		
9	**9310-SH-1500**	**Safety Shower and Eyewasher**	ANSI Z358.1	1	SS304; Minimum flowrate 88L/min @2 barg	Junan	China	On 40' high cube container	
10		**Piping, Fitting and Valve**							
10.1		PP Piping and Fitting		Lot	For all water piping except joint to some pump, ASME standard, FDA approved	Hershey	China		

PACT	EQUIPMENT LIST	PO Name:Potable Water Treatment 9310-GP-1100					Rev: D	
		Drawing Ref.: PACT-2010-NE009-A0104					Date:20-July-2011	
Item	**Tag No.**	**Major Equipment/Structure**	**Type**	**Qty.**	**Specification**	**Manufacturer**	**Origin**	**LOCATION**	**Remark**
10.2		SS304 Piping and Fitting		Lot	For all air piping , ASME Standard,food grade	Bao Steel	China		
10.3		Plastic Valve		Lot	ASME standard,food grade	Stubbe	Germany		
10.4		Metal Valve		Lot	ASME standard,food grade	Watts	China		
10.5		Piping Insulation		Lot	For outdoor piping insulated with polyurethane+SS304 jacket	PACT	China		
11		**Control System**							See: A3401
12		**Platform, Handrails,Stair and Ladders**		Lot	Carbon steel with epoxy painted	PACT	China		

APPENDIX B

POTABLE WATER TREATMENT PLANT

EQUIPMENT DATA SHEETS

TECHNICAL DATA SHEET

Doc. Ref: PACT-2010-NE005-A1001

TAG NO. 9310-PU-1400-A/B

NAME Potable Water Feed Pump

	ISSUE	A	B	C	D	E	F
PROJECT NUMBER:9806J-UNIT 9310	DATE	20-Apr-11	20-Jun-11	8-Oct-11	16-Nov-11		
SERVICE:POTABLE TREATMENT PACKAGE	PURPOSE	HJM	HJM	HJM	HJM		
LOCATION: FRANCE	CHECKED	SZG	SZG	SZG	SZG		
PLANT	APPROVED	FGH	FGH	FGH	FGH		

	DESCRIPTION		UNITS	DATA	Iss
	GENERAL				
1				ITT Lowara Co.Ltd.	
2	MODEL / SIZE			SHS40-200/55	
3				IN 40" CONTAINER	
4	PARALLEL OPERATION (YES/NO)			NO	
	OPERATING CONDITIONS				
1	REQUIRED NUMBER			2	
2	OPERATION MODE			1CONTINUOUS OPERATION 1 STANDBY	
3	HAZARDOUS AREA CLASSIFICATION			NON-HAZARDOUS	
4	FLUID PUMPED			POTABLE WATER	
5	FLUID CHARACTERISTICS			pH =6.5-8.5	
6	AMBIENT TEMPERATURE	Min	°C	5	
		Norm	°C	40	
		Max	°C	47	
7	VAPOUR PRESSURE @ Pumping Temperature		Bar g	0.0234 @20°C	
8	SPECIFIC HEAT		kJ/kg°C	4.18	
9	VISCOSITY @ Pumping Temperature		cP @ °C	0.986 @ 5°C	
10	CHLORIDE CONTENT		ppm	1ppm max	
11	SOLIDS CONTENT / SIZE				
12	FLOW RATE	Norm	m³/h	20	
13	HEAD	Norm	m	43	
	PERFORMANCE				
1	CAPACITY	Rated	m³/h	20.5	
2	HEAD	Rated	m	45.4	
3	PUMP SPEED	Normal	rev / min	2900	
4	IMPELLER DIAMETER	Rated	mm	190	
5	NUMBER OF STAGES			1	
6	NPSHR		m	1.7	
7	EFFICIENCY	Rated	%	59.3	
8	MAXIMUM FLOW		m³/h	48	
9	MINIMUM HEAD		m	25	
10	MAXIMUM HEAD		m	49.1	
	PERFORMANCE (cont.)				
1	ABSORBED POWER RATED IMPELLER				
	Rated Flow and Rated Head		KW	4.3	
	CONNECTIONS				

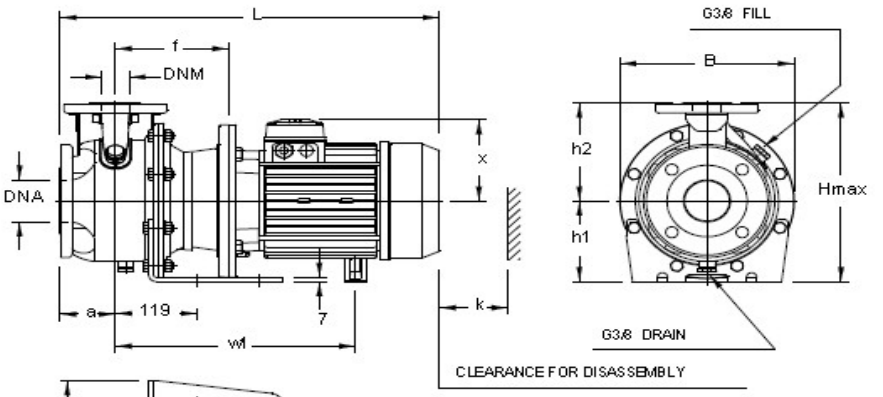
		TYPE	RATING	SIZE	POSITION
1					
2	SUCTION	FLANGE RF	PN16	DN65	END
3	DISCHARGE	FLANGE RF	PN16	DN40	TOP
4	CASING VENT	THREAD G		DN10"	TOP
5	CASING DRAIN	THREAD G		DN10"	BOTTOM

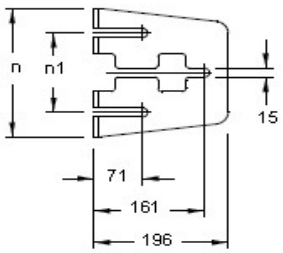
	MATERIALS OF CONSTRUCTION	
1	CASING	ANSI 316L
2	IMPELLER	ANSI 316L
3	SEAL HOUSING	ANSI 316L
4	WEAR RING	ANSI 316L
5	COUNTERWEAR RING	ANSI 316L
6	RIGID SHAFT COUPLING	ANSI 316
7	IMPELLER LOCKNUT AND WASHER	ANSI 316
8	TAB	ANSI 316L
9	FILL AND DRAIN PLUGS	ANSI 316L
10	ELASMOTERS	FPM
11	MOTOR BRACKET	ALUMINIUM
12	ADAPTER MOTOR COUPLING	CAST IRON ASTM CLASS 25
	MATERIALS OF CONSTRUCTION	
13	PUMP BODY FASTENING BOLT &SCREW	GALVANIZED STEEL
14	SHAFT SEAL	
	ROTATING ASSEMBLY	V-CERAMIC ALUMINA
	FIXED ASSAMBLY	B-CARBON
	ELASTOMERS	V-FPM
	SPRINGS	G-ANSI 316
	OTHER COMPONENTS	G-ANSI 316

	TECHNICAL DATA SHEET	Doc. Ref: PACT-2010-NE005-A1001	
		TAG NO.	9310-PU-1400-A/B
		NAME	Potable Water Feed Pump

	ISSUE	A	B	C	D	E	F
PROJECT NUMBER:9806J-UNIT 9310	DATE	20-Apr-11	20-Jun-11	8-Oct-11	16-Nov-11		
SERVICE:POTABLE TREATMENT PACKAGE	PURPOSE	HJM	HJM	HJM	HJM		
	CHECKED	SZG	SZG	SZG	SZG		
PLANT	APPROVED	FGH	FGH	FGH	FGH		

	DESCRIPTION	UNITS	DATA	Iss
	MECHANICAL DATA			
1	PUMP TYPE		HORIZONTAL CENTRIFUGAL PUMP	
2	IMPELLER Type		CLOSE	
3	ROTATION (Facing Motor End)		CLOCKWISE	
4	LUBRICANT		GREASE(Maintenancefree)	
5	BASEPLATE TYPE		FOOT-MOUNTED	
6	MECHANICAL SEAL MODEL		002232201	
	DRIVE ARRANGEMENT			
1	DRIVER TYPE		THREE PHASE FREQUENCY CONTROL MOTOR	
2	MANUFACTURER		TECO	
3	POWER SUPPLY		3PHASE-400VAC/50HZ	
4	RATED POWER / SPEED	kw / rpm	5.5/2900	
5	RATED CURRENT	A	10.4	
6	INGRESS PROTECTION CLASS		IP 55	
7	INSULATION CLASS / TEMPERATURE RISE		F/B	
8	MOTOR DUTY TYPE		S1 (Continuous Running Duty)	
9	MOTOR COOLING METHOD		IC 416	
10	COLOR		RAL5010	
11	CABLE ENTRY DIRECTION		TOP	
	SCOPE OF SUPPLY			
1	PUMP			
2	DRIVER			
3	BASEPLATE			
4	ONE MECHNICAL SEAL			
	WEIGHTS & DIMENSIONS			
1	TOTAL WEIGHT	kg	63	

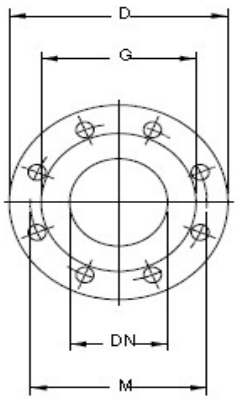




SHS WITH PUMP SUPPORT FOOT
MOTORS UP TO 7.5kW

PUMP FLANGES

DN	D	M	G	HOLES		MAX.
				N°	DIA.	THICKNESS
25	115	85	56	4	18	16
32	140	100	64	4	18	16
40	150	110	68	4	18	16
50	165	125	83	4	18	18
65	185	145	104	4	18	18
80	200	160	116	8	18	20
100	225	180	142	8	18	20



TECHNICAL DATA SHEET

Doc. Ref: PACT-2010-NE005-A1001

TAG NO. 9310-PU-1310-A/B

NAME Chiller Feed Pump

	ISSUE	A	B	C	D	E	F
PROJECT NUMBER:9806J-UNIT 9310	DATE	20-Apr-11	20-Jun-11	8-Oct-11	16-Nov-11		
SERVICE:POTABLE TREATMENT PACKAGE	PURPOSE	HJM	HJM	HJM	HJM		
	CHECKED	SZG	SZG	SZG	SZG		
PLANT	APPROVED	FGH	FGH	FGH	FGH		

	DESCRIPTION		UNITS	DATA	Iss
1	**GENERAL**				
2	MANUFACTURER			ITT Lowara Co.Ltd.	
3	MODEL / SIZE			4HMS4T	
4	LOCATION			IN 40" CONTAINER	
5	PARALLEL OPERATION (YES/NO)			NO	
	OPERATING CONDITIONS				
1	REQUIRED NUMBER			2	
2	OPERATION MODE			1CONTINUOUS OPERATION 1 STANDBY	
3	HAZARDOUS AREA CLASSIFICATION			NON-HAZARDOUS	
4	FLUID PUMPED			POTABLE WATER	
5	FLUID CHARACTERISTICS			pH =6.5-8.5	
6	AMBIENT TEMPERATURE	Min	°C	5	
7		Norm	°C	40	
8		Max	°C	47	
9	VAPOUR PRESSURE @ Pumping Temperature		Bar g	0.0234 @20°C	
10	SPECIFIC GRAVITY @ Pumping Temperature			0.998 @20°C	
11	SPECIFIC HEAT		kJ/kg°C	4.18	
12	CHLORIDE CONTENT		ppm	11	
13	SOLIDS CONTENT / SIZE				
14	FLOW RATE	Norm	m³/h	6	
15	HEAD	Norm	m	12	
	PERFORMANCE				
1	CAPACITY	Rated	m³/h	6.21	
2	HEAD	Rated	m	12.8	
3	PUMP SPEED	Normal	rev / min	2720	
4	IMPELLER DIAMETER	RATED	mm	96	
5	NUMBER OF STAGES			3	
6	NPSHR		m	1.9	
7	EFFICIENCY	Rated	%	51	
8	MAXIMUM FLOW		m³/h	7.5	
9	MINIMUM HEAD		m	9	
10	MAXIMUM HEAD		m	26	
	PERFORMANCE (cont.)				
1	ABSORBED POWER RATED IMPELLER				
	Rated Flow and Rated Head		KW	0.426	
	CONNECTIONS				

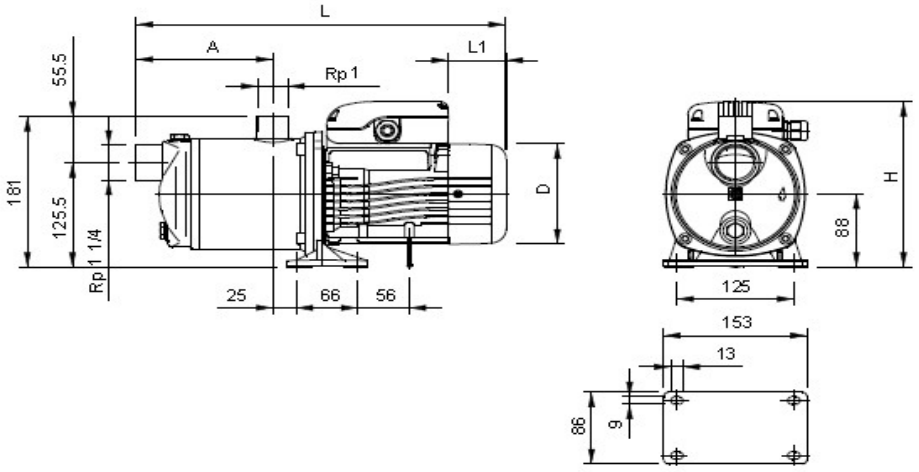
		TYPE	RATING	SIZE	POSITION
1					
2	SUCTION	FLANGE RF		DN32	END
3	DISCHARGE	FLANGE RF		DN25	TOP

	MATERIALS OF CONSTRUCTION			
1	CASING			ANSI 316L
2	IMPELLER			ANSI 316L
3	SEAL HOUSING DISK			ANSI 316L
4	DIFFUSERS			ANSI 316L
5	FIRST STAGE CASE			ANSI 316L
6	SHAFT SEAL			
	ROTATING ASSAMBLY			V-CERAMIC ALUMINA
	FIXED ASSAMBLY			B-CARBON
	ELASTOMERS			E-EPDM
	SPRINGS			G-ANSI 316
	OTHER COMPONENTS			G-ANSI 316
	MECHANICAL DATA			
1	PUMP TYPE			HORIZONTAL MULTISTAGE CENTRIFUGAL PUMP
2	IMPELLER	Type		CLOSE
3	ROTATION (Facing Motor End)			CLOCKWISE
4	LUBRICANT			GREASE(Maintenancefree)
5	BASEPLATE	TYPE		FOOT-MOUNTED
6	MECHANICAL SEAL MODEL			002231475

	TECHNICAL DATA SHEET	Doc. Ref: PACT-2010-NE005-A1001
		TAG NO. 9310-PU-1310-A/B
		NAME Chiller Feed Pump

	ISSUE	A	B	C	D	E	F
PROJECT NUMBER:9806J-UNIT 9310	DATE	20-Apr-11	20-Jun-11	8-Oct-11	16-Nov-11		
SERVICE:POTABLE TREATMENT PACKAGE	PURPOSE	HJM	HJM	HJM	HJM		
	CHECKED	SZG	SZG	SZG	SZG		
PLANT	APPROVED	FGH	FGH	FGH	FGH		

	DESCRIPTION	UNITS	DATA	Iss
	DRIVE ARRANGEMENT			
1	DRIVER TYPE		THREE PHASE ASYNCHRONOUS INDUCTION MOTOR	
2	MANUFACTURER		Lowara	
3	POWER SUPPLY		3PHASE-400VAC/50HZ	
4	RATED POWER / SPEED	kw / rpm	0.45/2720	
5	RATED CURRENT	A	1.49	
6	INGRESS PROTECTION CLASS		IP 55	
7	INSULATION CLASS / TEMPERATURE RISE		F/B	
8	MOTOR DUTY TYPE		S1 (Continuous Running Duty)	
9	MOTOR COOLING METHOD		IC 411	
10	COLOR		RAL5010	
11	CABLE ENTRY DIRECTION		TOP	
	WEIGHTS & DIMENSIONS			
1	TOTAL WEIGHT	Kg	7.8	
2	BASEPLATE FOOTPRINT LENGTH x WIDTH	mm	153X86mm	



Dimensions mm

A	96		
D	120		
H	199		
L	345		
L1	62		

TECHNICAL DATA SHEET

Doc. Ref: PACT-2010-NE009-A1001	
TAG NO.	9310-PU-1110-A/B
NAME	Water Treatment Feed Pump

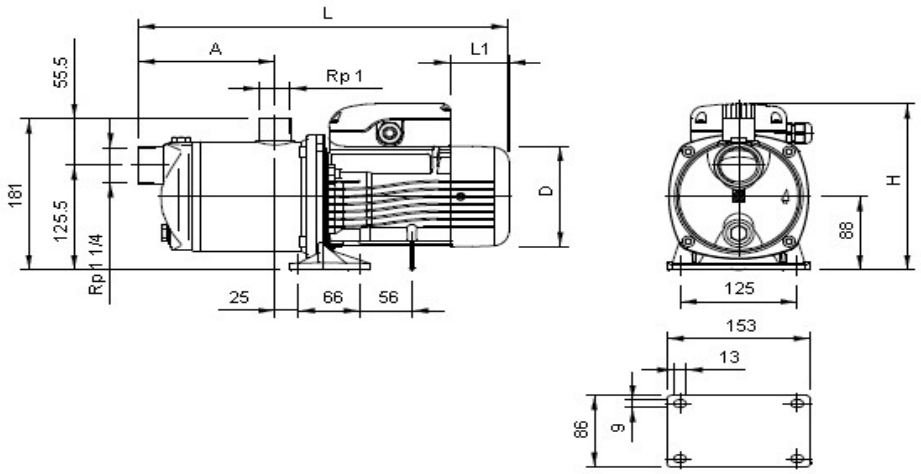
	ISSUE	A	B	C	D	E	F
PROJECT NUMBER:9806J-UNIT 9310	DATE	20-Apr-11	20-Jun-11	8-Oct-11	16-Nov-11		
SERVICE:POTABLE TREATMENT PACKAGE	PURPOSE	HJM	HJM	HJM	HJM		
	CHECKED	SZG	SZG	SZG	SZG		
PLANT	APPROVED	FGH	FGH	FGH	FGH		

	DESCRIPTION		UNITS	DATA				Iss
1	**GENERAL**							
2	MANUFACTURER			ITT Lowara Co.Ltd.				
3	MODEL / SIZE			4HMS5T				
4	LOCATION			IN 40" CONTAINER				
5	PARALLEL OPERATION (YES/NO)			NO				
	OPERATING CONDITIONS							
1	REQUIRED NUMBER			2				
2	OPERATION MODE			1CONTINUOUS OPERATION 1 STANDBY				
3	HAZARDOUS AREA CLASSIFICATION			NON-HAZARDOUS				
4	FLUID PUMPED			WELL WATER				
5	FLUID CHARACTERISTICS			pH =8.5				
6	AMBIENT TEMPERATURE	Min	°C	5				
7		Norm	°C	40				
8		Max	°C	47				
9	VAPOUR PRESSURE @ Pumping Temperature		Bar g	0.0234 @20°C				
10	SPECIFIC GRAVITY @ Pumping Temperature			0.998 @20°C				
11	SPECIFIC HEAT		kJ/kg°C	4.18				
12	CHLORIDE CONTENT		ppm	11				
13	SOLIDS CONTENT / SIZE							
14	FLOW RATE	Norm	m³/h	5				
15	HEAD	Norm	m	22				
	PERFORMANCE							
1	CAPACITY	Rated	m³/h	5.02				
2	HEAD	Rated	m	22.1				
3	PUMP SPEED	Normal	rev / min	2705				
4	NPSHR		m	1.66				
5	IMPELLER DIAMETER	RATED	mm	96				
6	NUMBER OF STAGES			4				
7	EFFICIENCY	Rated	%	56				
8	MAXIMUM FLOW		m³/h	7.2				
9	MINIMUM HEAD		m	12.5				
10	MAXIMUM HEAD		m	37.2				
	PERFORMANCE (cont.)							
1	ABSORBED POWER RATED IMPELLER							
	Rated Flow and Rated Head		KW	0.541				
	CONNECTIONS							
1				TYPE	RATING	SIZE	POSITION	
2	SUCTION			FLANGE RF		DN32	END	
3	DISCHARGE			FLANGE RF		DN25	TOP	
	MATERIALS OF CONSTRUCTION							
1	CASING			ANSI 316L				
2	IMPELLER			ANSI 316L				
3	SEAL HOUSING DISK			ANSI 316L				
4	DIFFUSERS			ANSI 316L				
5	FIRST STAGE CASE			ANSI 316L				
6	SHAFT SEAL							
	ROTATING ASSAMBLY			V-CERAMIC ALUMINA				
	FIXED ASSAMBLY			B-CARBON				
	ELASTOMERS			E-EPDM				
	SPRINGS			G-ANSI 316				
	OTHER COMPONENTS			G-ANSI 316				
	MECHANICAL DATA							
1	PUMP TYPE			HORIZONTAL MULTISTAGE CENTRIFUGAL PUMP				
2	IMPELLER	Type		CLOSE				
3	ROTATION (Facing Motor End)			CLOCKWISE				
4	LUBRICANT			GREASE(Maintenancefree)				
5	BASEPLATE	TYPE		FOOT-MOUNTED				
6	MECHANICAL SEAL MODEL			002231475				

PACT	TECHNICAL DATA SHEET	Doc. Ref: PACT-2010-NE009-A1001	
		TAG NO.	9310-PU-1110-A/B
		NAME	Water Treatment Feed Pump

	ISSUE	A	B	C	D	E	F
PROJECT NUMBER:9806J-UNIT 9310	DATE	20-Apr-11	20-Jun-11	8-Oct-11	16-Nov-11		
SERVICE:POTABLE TREATMENT PACKAGE	PURPOSE	HJM	HJM	HJM	HJM		
	CHECKED	SZG	SZG	SZG	SZG		
PLANT	APPROVED	FGH	FGH	FGH	FGH		

	DESCRIPTION	UNITS	DATA	Iss
	DRIVE ARRANGEMENT			
1	DRIVER TYPE		THREE PHASE ASYNCHRONOUS INDUCTION MOTOR	
2	MANUFACTURER		Lowara	
3	POWER SUPPLY		3PHASE-400VAC/50HZ	
4	RATED POWER / SPEED	kw / rpm	0.55/2900	
5	RATED CURRENT	A	1.67	
6	INGRESS PROTECTION CLASS		IP 55	
7	INSULATION CLASS / TEMPERATURE RISE		F/B	
8	MOTOR DUTY TYPE		S1 (Continuous Running Duty)	
9	MOTOR COOLING METHOD		IC 411	
10	CABLE ENTRY DIRECTION		TOP	
	SCOPE OF SUPPLY			
1	PUMP			
2	DRIVER			
3	BASEPLATE			
4	ONE MECHNICAL SEAL			
	WEIGHTS & DIMENSIONS			
1	TOTAL WEIGHT	kg	8.7	
2	BASEPLATE FOOTPRINT LENGTH x WIDTH	mm	153X86mm	



Dimensions mm

A	146
D	120
H	199
L	395
L1	62

TECHNICAL DATA SHEET

Doc. Ref: PACT-2010-NE009-A1001

TAG NO.	9310-PU-1120-A/B
NAME	Filling Truck Network Feed Pump

	ISSUE	A	B	C	D	E	F
PROJECT NUMBER:9806J-UNIT 9310	DATE	20-Apr-11	20-Jun-11	8-Oct-11	16-Nov-11		
SERVICE:POTABLE TREATMENT PACKAGE	PURPOSE	HJM	HJM	HJM	HJM		
	CHECKED	SZG	SZG	SZG	SZG		
PLANT	APPROVED	FGH	FGH	FGH	FGH		

	DESCRIPTION		UNITS	DATA	Iss
1	**GENERAL**				
2	MANUFACTURER			ITT Lowara Co.Ltd.	
3	MODEL / SIZE			SHE40-160/40	
4	LOCATION			IN 40" CONTAINER	
5	PARALLEL OPERATION (YES/NO)			NO	
	OPERATING CONDITIONS				
1	REQUIRED NUMBER			2	
2	OPERATION MODE			1CONTINUOUS OPERATION 1 STANDBY	
3	HAZARDOUS AREA CLASSIFICATION			NON-HAZARDOUS	
4	FLUID PUMPED			WELL WATER	
5	FLUID CHARACTERISTICS			pH =8.5	
6	OPERATING TEMPERATURE	Min	°C	5	
7		Norm	°C	40	
8		Max	°C	47	
9	VAPOUR PRESSURE @ Pumping Temperature		Bar g	0.0234 @20°C	
10	SPECIFIC GRAVITY @ Pumping Temperature			0.998 @20°C	
11	SPECIFIC HEAT		kJ/kg°C	4.18	
12	CHLORIDE CONTENT		ppm	11	
13	SOLIDS CONTENT / SIZE				
14	FLOW RATE	Norm	m³/h	33	
15	HEAD	Norm	m	25	
	PERFORMANCE				
1	CAPACITY	Rated	m³/h	34.6	
2	HEAD	Rated	m	27.5	
3	PUMP SPEED	Normal	rev / min	2900	
4	IMPELLER DIAMETER	Rated	mm	171	
5	NUMBER OF STAGES			1	
6	NPSHR		m	2.26	
7	EFFICIENCY	Rated	%	69.5	
8	MINIMUM FLOW		m³/h		
9	MAXIMUM FLOW		m³/h	48	
10	MINIMUM HEAD		m	18.6	
11	MAXIMUM HEAD		m	37.9	
	PERFORMANCE (cont.)				
1	ABSORBED POWER RATED IMPELLER				
	Rated Flow and Rated Head		KW	3.74	
	CONNECTIONS				

		TYPE	RATING	SIZE	POSITION
1					
2	SUCTION	FLANGE RF	PN16	DN65	END
3	DISCHARGE	FLANGE RF	PN16	DN40	TOP
4	CASING VENT	THREAD G		DN10	TOP
5	CASING DRAIN	THREAD G		DN10	BOTTOM

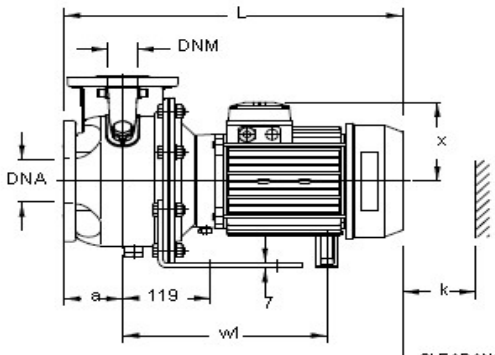
	MATERIALS OF CONSTRUCTION		
1	CASING		ANSI 316L
2	IMPELLER		ANSI 316L
3	SEAL HOUSING		ANSI 316L
4	WEAR RING		ANSI 316L
5	COUNTERWEAR RING		ANSI 316L
6	SHAFT EXTENSION		ANSI 316
7	RIGID SHAFT COUPLING		ANSI 316
7	IMPELLER LOCKNUT AND WASHER		ANSI 316
8	TAB		ANSI 316L
9	FILL AND DRAIN PLUGS		ANSI 316
10	ELASMOTERS		FPM
11	MOTOR BRACKET		ALUMINIUM
12	PUMP BODY FASTENING BOLT &SCREW		GALVANIZED STEEL
13	SHAFT SEAL		
	ROTATING ASSAMBLY		V-CERAMIC ALUMINA
	FIXED ASSAMBLY		B-CARBON
	ELASTOMERS		E-FPM
	SPRINGS		G-ANSI 316
	OTHER COMPONENTS		G-ANSI 316

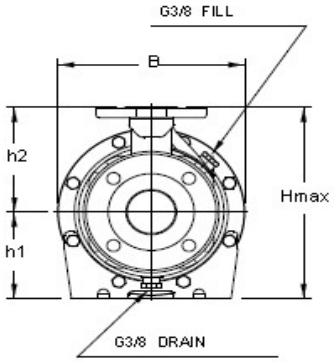
TECHNICAL DATA SHEET

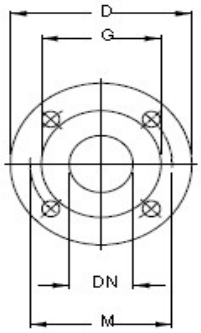
Doc. Ref:	PACT-2010-NE009-A1001
TAG NO.	9310-PU-1120-A/B
NAME	Filling Truck Network Feed Pump

	ISSUE	A	B	C	D	E	F
PROJECT NUMBER:9806J-UNIT 9310	DATE	20-Apr-11	20-Jun-11	8-Oct-11	16-Nov-11		
SERVICE:POTABLE TREATMENT PACKAGE	PURPOSE	HJM	HJM	HJM	HJM		
	CHECKED	SZG	SZG	SZG	SZG		
PLANT	APPROVED	FGH	FGH	FGH	FGH		

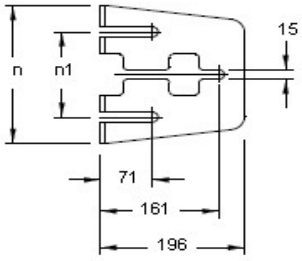
	DESCRIPTION	UNITS	DATA	Iss
	MECHANICAL DATA			
1	PUMP TYPE		HORIZONTAL CENTRIFUGAL PUMP	
2	IMPELLER Type		CLOSE	
3	ROTATION (Facing Motor End)		CLOCKWISE	
4	LUBRICANT		GREASE(Maintenancefree)	
5	BASEPLATE TYPE		FOOT-MOUNTED	
6	MECHANICAL SEAL MODEL		002232201	
	DRIVE ARRANGEMENT			
1	DRIVER TYPE		THREE PHASE ASYNCHRONOUS INDUCTION MOTOR	
2	MANUFACTURER		Lowara	
3	POWER SUPPLY		3PHASE-400VAC/50HZ	
4	RATED POWER / SPEED	kw / rpm	4/2900	
5	RATED CURRENT	A	7.63	
6	INGRESS PROTECTION CLASS		IP 55	
7	INSULATION CLASS / TEMPERATURE RISE		F/B	
8	MOTOR DUTY TYPE		S1 (Continuous Running Duty)	
9	MOTOR COOLING METHOD		IC 411	
10	COLOR		RAL5010	
11	CABLE ENTRY DIRECTION		TOP	
	SCOPE OF SUPPLY			
1	PUMP			
2	DRIVER			
3	BASEPLATE			
4	ONE MECHNICAL SEAL			
	WEIGHTS & DIMENSIONS			
1	TOTAL WEIGHT	kg	40	



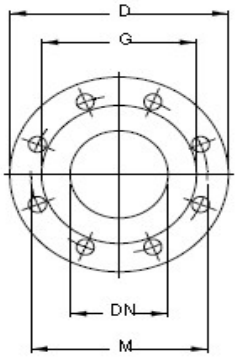




CLEARANCE FOR DISASSEMBLY



SHE WITH PUMP SUPPORT FOOT
MOTORS UP TO 11kW



PUMP FLANGES

DN	D	M	G	HOLES		MAX.
				N°	DIA.	THICKNESS
25	115	85	56	4	18	16
32	140	100	64	4	18	16
40	150	110	68	4	18	16
50	165	125	83	4	18	18
65	185	145	104	4	18	18
80	200	160	116	8	18	20
100	225	180	142	8	18	20

TECHNICAL DATA SHEET

Doc. Ref: PACT-2010-NE009-A1001

TAG NO. 9310-PU-1210-A/B

NAME Backwash Pump

	ISSUE	A	B	C	D	E	F
PROJECT NUMBER:9806J-UNIT 9310	DATE	20-Apr-11	20-Jun-11	8-Oct-11	16-Nov-11		
SERVICE:POTABLE TREATMENT PACKAGE	PURPOSE	HJM	HJM	HJM	HJM		
	CHECKED	SZG	SZG	SZG	SZG		
PLANT	APPROVED	FGH	FGH	FGH	FGH		

	DESCRIPTION		UNITS	DATA	Iss
1	**GENERAL**				
2	MANUFACTURER			ITT Lowara Co.Ltd.	
3	MODEL / SIZE			SHE40-160/30	
4	LOCATION			IN 40" CONTAINER	
5	PARALLEL OPERATION (YES/NO)			NO	
	OPERATING CONDITIONS				
1	REQUIRED NUMBER			2	
2	OPERATION MODE			1CONTINUOUS OPERATION 1 STANDBY	
3	HAZARDOUS AREA CLASSIFICATION			NON-HAZARDOUS	
4	FLUID PUMPED			POTABLE WATER	
5	FLUID CHARACTERISTICS			pH =6.5-8.5	
6	OPERATING TEMPERATURE	Min	°C	5	
7		Norm	°C	40	
8		Max	°C	47	
9	VAPOUR PRESSURE @ Pumping Temperature		Bar g	0.0234 @20°C	
10	SPECIFIC GRAVITY @ Pumping Temperature			0.998 @20°C	
11	SPECIFIC HEAT		kJ/kg°C	4.18	
12	CHLORIDE CONTENT		ppm	11	
13	SOLIDS CONTENT / SIZE				
14	FLOW RATE	Norm	m³/h	28	
15	HEAD	Norm	m	20	
	PERFORMANCE				
1	CAPACITY	Rated	m³/h	30.5	
2	HEAD	Rated	m	23.8	
3	PUMP SPEED	Normal	rev / min	2900	
4	IMPELLER DIAMETER	Rated	mm	159	
5	NUMBER OF STAGES			1	
6	NPSHR		m	1.9	
7	EFFICIENCY	Rated	%	67.43	
8	MINIMUM FLOW		m³/h	0	
9	MAXIMUM FLOW		m³/h	45	
10	MINIMUM HEAD		m	15.1	
11	MAXIMUM HEAD		m	32.1	
	PERFORMANCE (cont.)				
1	ABSORBED POWER RATED IMPELLER				
	Rated Flow and Rated Head		KW	2.9	

	CONNECTIONS	TYPE	RATING	SIZE	POSITION
1					
2	SUCTION	FLANGE RF	PN16	DN65	END
3	DISCHARGE	FLANGE RF	PN16	DN40	TOP
4	CASING VENT	THREAD G		DN10	TOP
5	CASING DRAIN	THREAD G		DN10	BOTTOM

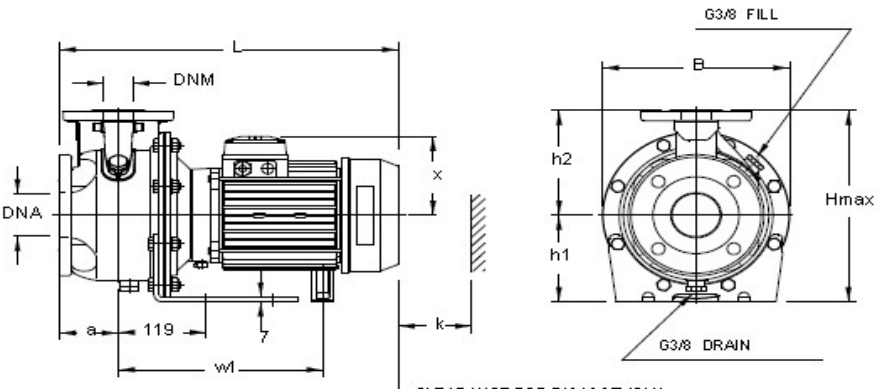
	MATERIALS OF CONSTRUCTION	
1	CASING	ANSI 316L
2	IMPELLER	ANSI 316L
3	SEAL HOUSING	ANSI 316L
4	WEAR RING	ANSI 316L
5	COUNTERWEAR RING	ANSI 316L
6	SHAFT EXTENSION	ANSI 316
7	RIGID SHAFT COUPLING	ANSI 316
8	IMPELLER LOCKNUT AND WASHER	ANSI 316
9	TAB	ANSI 316L
10	FILL AND DRAIN PLUGS	ANSI 316
11	ELASMOTERS	FPM
12	MOTOR BRACKET	ALUMINIUM
	MATERIALS OF CONSTRUCTION	
13	PUMP BODY FASTENING BOLT &SCREW	GALVANIZED STEEL
14	SHAFT SEAL	
	ROTATING ASSAMBLY	V-CERAMIC ALUMINA
	FIXED ASSAMBLY	B-CARBON
	ELASTOMERS	V-FPM
	SPRINGS	G-ANSI 316
	OTHER COMPONENTS	G-ANSI 316

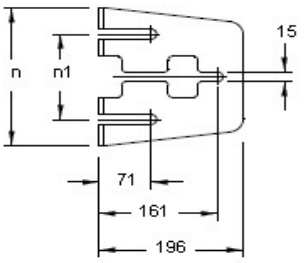
TECHNICAL DATA SHEET

Doc. Ref:	PACT-2010-NE009-A1001
TAG NO.	9310-PU-1210-A/B
NAME	Backwash Pump

	ISSUE	A	B	C	D	E	F
PROJECT NUMBER:9806J-UNIT 9310	DATE	20-Apr-11	20-Jun-11	8-Oct-11	16-Nov-11		
SERVICE:POTABLE TREATMENT PACKAGE	PURPOSE	HJM	HJM	HJM	HJM		
	CHECKED	SZG	SZG	SZG	SZG		
PLANT	APPROVED	FGH	FGH	FGH	FGH		

	DESCRIPTION	UNITS	DATA	Iss
	MECHANICAL DATA			
1	PUMP TYPE		HORIZONTAL CENTRIFUGAL PUMP	
2	IMPELLER Type		CLOSE	
3	ROTATION (Facing Motor End)		CLOCKWISE	
4	LUBRICANT		GREASE(Maintenancefree)	
5	BASEPLATE TYPE		FOOT-MOUNTED	
6	MECHANICAL SEAL MODEL		002232201	
	DRIVE ARRANGEMENT			
1	DRIVER TYPE		THREE PHASE ASYNCHRONOUS INDUCTION MOTOR	
2	MANUFACTURER		Lowara	
2	POWER SUPPLY		3PHASE-400VAC/50HZ	
3	RATED POWER / SPEED	kw / rpm	3/2900	
3	RATED CURRENT	A	6.19	
4	INGRESS PROTECTION CLASS		IP 55	
5	INSULATION CLASS / TEMPERATURE RISE		F/B	
6	MOTOR DUTY TYPE		S1 (Continuous Running Duty)	
7	MOTOR COOLING METHOD		IC 411	
8	COLOR		RAL5010	
8	CABLE ENTRY DIRECTION		TOP	
	SCOPE OF SUPPLY			
1	PUMP			
2	DRIVER			
3	BASEPLATE			
4	ONE MECHNICAL SEAL			
	WEIGHTS & DIMENSIONS			
1	TOTAL WEIGHT	kg	32	

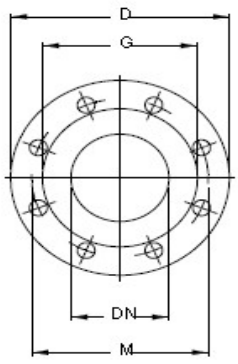




SHE WITH PUMP SUPPORT FOOT
MOTORS UP TO 11kW

PUMP FLANGES

DN	D	M	G	HOLES N°	HOLES DIA.	MAX. THICKNESS
25	115	85	56	4	18	16
32	140	100	64	4	18	16
40	150	110	68	4	18	16
50	165	125	83	4	18	18
65	185	145	104	4	18	18
80	200	160	116	8	18	20
100	225	180	142	8	18	20



TECHNICAL DATA SHEET

Doc. Ref: PACT-2010-NE009-A1001

TAG NO. 9310-PU-1240-A/B

NAME Backwash Reject Water Pump

	ISSUE	A	B	C	D	E	F
PROJECT NUMBER:9806J-UNIT 9310	DATE	20-Apr-11	20-Jun-11	8-Oct-11	16-Nov-11		
SERVICE:POTABLE TREATMENT PACKAGE	PURPOSE	HJM	HJM	HJM	HJM		
	CHECKED	SZG	SZG	SZG	SZG		
PLANT	APPROVED	FGH	FGH	FGH	FGH		

	DESCRIPTION		UNITS	DATA	Iss
1	**GENERAL**				
2	MANUFACTURER			ITT Lowara Co.Ltd.	
3	MODEL / SIZE			CA120/33	
4	LOCATION			OUTDOOR(UNDER SHELTER)On concrete slab:Elevation:+0.300m	
5	PARALLEL OPERATION (YES/NO)			NO	
	OPERATING CONDITIONS				
1	REQUIRED NUMBER			2	
2	OPERATION MODE			1CONTINUOUS OPERATION 1 STANDBY	
3	HAZARDOUS AREA CLASSIFICATION			NON-HAZARDOUS	
4	FLUID PUMPED			BACKWASH WATER	
5	FLUID CHARACTERISTICS			pH =6.5-8.5	
6	OPERATING TEMPERATURE	Min	°C	5	
7		Norm	°C	40	
8		Max	°C	47	
9	VAPOUR PRESSURE @ Pumping Temperature		Bar g	0.0234 @20°C	
10	SPECIFIC GRAVITY @ Pumping Temperature			0.998 @20°C	
11	SPECIFIC HEAT		kJ/kg°C	4.18	
12	CHLORIDE CONTENT		ppm	11	
13	SOLIDS CONTENT / SIZE				
14	FLOW RATE	Norm	m³/h	5	
15	HEAD	Norm	m	30	
	PERFORMANCE				
1	CAPACITY	Rated	m³/h	5.29	
2	HEAD	Rated	m	33.6	
3	PUMP SPEED	Normal	rev / min	2900	
4	NUMBER OF STAGES			2	
5	NPSHR		m	5.91	
6	EFFICIENCY	Rated	%	45.9	
7	MAXIMUM FLOW		m³/h	9	
8	MINIMUM HEAD		m	21	
9	MAXIMUM HEAD		m	44.4	
	PERFORMANCE (cont.)				
1	ABSORBED POWER RATED IMPELLER				
	Rated Flow and Rated Head		KW	1.06	
	CONNECTIONS				

		TYPE	RATING	SIZE	POSITION
1					
2	SUCTION	FLANGE RF		DN32	END
3	DISCHARGE	FLANGE RF		DN25	TOP

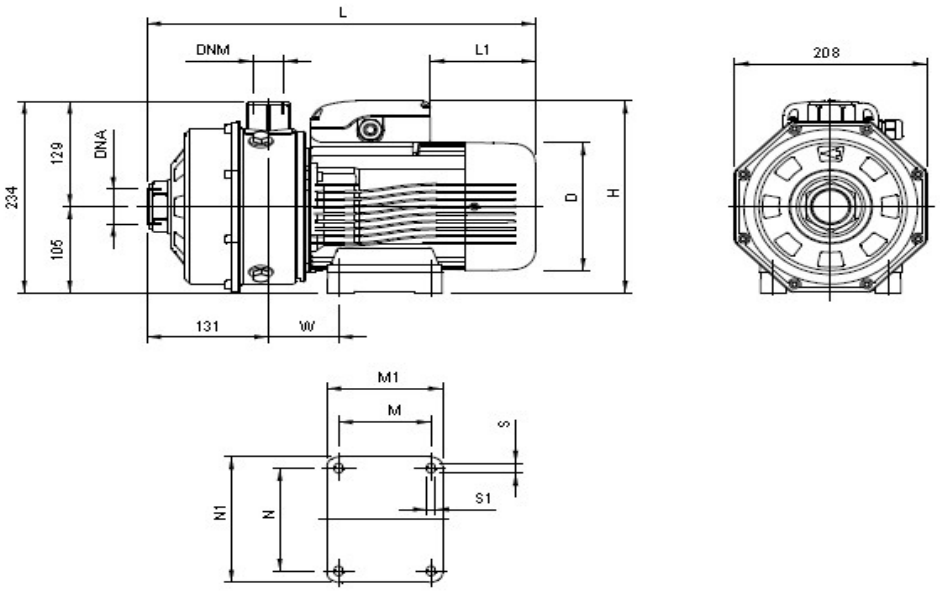
	MATERIALS OF CONSTRUCTION		
1	CASING		ANSI 304
2	IMPELLER		ANSI 304
3	SUCTION FLANGE		ANSI 304
4	DIFFUSER COVER		ANSI 304
5	SHAFT SEAL		
	ROTATING ASSAMBLY		V-CERAMIC ALUMINA
	FIXED ASSAMBLY		B-CARBON
	ELASTOMERS		P-NBR
	SPRINGS		G-ANSI 316
	OTHER COMPONENTS		G-ANSI 304
	MECHANICAL DATA		
1	PUMP TYPE		HORIZONTAL MULTISTAGE CENTRIFUGAL PUMP
2	IMPELLER Type		CLOSE
3	ROTATION (Facing Motor End)		CLOCKWISE
4	LUBRICANT		GREASE(Maintenancefree)
5	BASEPLATE TYPE		FOOT-MOUNTED
6	MECHANICAL SEAL MODEL		002228861

TECHNICAL DATA SHEET

Doc. Ref: PACT-2010-NE009-A1001	
TAG NO.	9310-PU-1240-A/B
NAME	Backwash Reject Water Pump

	ISSUE	A	B	C	D	E	F
PROJECT NUMBER:9806J-UNIT 9310	DATE	20-Apr-11	20-Jun-11	8-Oct-11	16-Nov-11		
SERVICE:POTABLE TREATMENT PACKAGE	PURPOSE	HJM	HJM	HJM	HJM		
	CHECKED	SZG	SZG	SZG	SZG		
PLANT	APPROVED	FGH	FGH	FGH	FGH		

	DESCRIPTION	UNITS	DATA	Iss
	DRIVE ARRANGEMENT			
1	DRIVER TYPE		THREE PHASE ASYNCHRONOUS INDUCTION MOTOR	
2	MANUFACTURER		Lowara	
3	POWER SUPPLY		3PHASE-400VAC/50HZ	
4	RATED POWER / SPEED	kw / rpm	1.1/2900	
5	RATED CURRENT	A	2.92	
6	INGRESS PROTECTION CLASS		IP55(outdoor motor）	
7	INSULATION CLASS / TEMPERATURE RISE		F/B	
8	MOTOR DUTY TYPE		S1 (Continuous Running Duty)	
9	MOTOR COOLING METHOD		IC 411	
11	CABLE ENTRY DIRECTION		TOP	
	SCOPE OF SUPPLY			
1	PUMP			
2	DRIVER			
3	BASEPLATE			
4	ONE MECHNICAL SEAL			
	WEIGHTS & DIMENSIONS			
1	TOTAL WEIGHT	kg	16.8	
2	BASEPLATE FOOTPRINT LENGTH x WIDTH	mm	125X100mm	



Dimension mm

D	156	M	100
DNA	Rp1.25	M1	125
DNM	Rp1	N	125
H	234	N1	153
L	420	S	12
L1	114	S1	9

TECHNICAL DATA SHEET

Doc. Ref: PACT-2010-NE009-A1001

TAG NO. 9310-BL-1220-A/B

NAME Air Scour Blower

	ISSUE	A	B	C	D	E	F
PROJECT NUMBER:9806J-UNIT 9310	DATE	20-Apr-11	20-Jun-11	8-Oct-11	16-Nov-11		
SERVICE:POTABLE TREATMENT PACKAGE	PURPOSE	HJM	HJM	HJM	HJM		
	CHECKED	SZG	SZG	SZG	SZG		
PLANT	APPROVED	FGH	FGH	FGH	FGH		

	DESCRIPTION		UNITS	DATA	Iss
	GENERAL				
1	MANUFACTURER			SJERP&JONGENEEL	
2	MODEL / SIZE			DBS575	
3	LOCATION			IN 40" CONTAINER	
	OPERATING CONDITIONS				
1	REQUIRED NUMBER			2	
2	OPERATION MODE			1 CONTINUOUS 1 STANDBY	
3	FLUID PUMPED			Air	
4	SEA LEVEL		m	425	
5	AMBIENT TEMPERATURE	Min	°C	5	
6		Norm	°C	40	
7		Max	°C	47	
8	AIR DENSITY		kg/m^3	0.79	
9	ATMOSPHERIC PRESSURE		mbar	1013	
10	AMBIENT TEMPERATURE			5 ~47	
11	CAPACITY	Norm	Nm^3/h	60	
12	DISCHARGE PRESSURE	Norm	kPa	44.1	
	BLOWER PERFORMANCE				
1	CAPACITY	Rated	Nm^3/h	85	
2	DISCHARGE PRESSURE	Rated	kPa	44.1	
3	BLOWER SPEED	Rated	rev / min	2900	
4	EFFICIENCY	Rated	%	NA	
5	DISCHARGE AIR TEMPERATURE		°C	122	

	CONNECTIONS	TYPE	RATING	SIZE	POSITION	
1						
2	SUCTION	F THREAD		2"BSP		
3	DISCHARGE	F THREAD		2"BSP		

	MATERIALS OF CONSTRUCTION			
1	CASING			DIE-CAST ALUMINIUM
2	IMPELLER			ALUMINIUM
3	DRIVE SHAFT			CARBON STEEL
4	BASE PLATE			CARBON STEEL
	MECHANICAL DATA			
1	BLOWER TYPE			SIDE CHANNEL BLOWER
2	POWER TRANSMISSION			DIRECT COUPLING
4	ROTATION DIRECTION (Facing Motor End)			COUNTER CLOCKWISE
5	NOISE LEVEL		dB(A)	75 at 1 meter
	DRIVE ARRANGEMENT			
1	DRIVER TYPE			THREE PHASE ASYNCHRONOUS INDUCTION MOTOR
2	MOTOR STANDARD			IEC
3	MANUFACTURER			DUTAIR
4	RATED POWER / SPEED		kw / rpm	7.5/2900
5	RATED CURRENT		A	14
6	INGRESS PROTECTION CLASS			IP55
7	INSULATION CLASS / TEMPERATURE RISE			F/B
8	MOTOR DUTY TYPE			S1 (Continuous Running Duty)
9	MOTOR COOLING METHOD			IC 411
10	CABLE ENTRY DIRECTION (Facing Motor End)			TOP
	SCOPE OF SUPPLY			
1	BLOWER			
2	DRIVER			
3	BASEPLATE			
4	INLET FILTER AND SILENCER			
5	FIRST FILL OF LUBRICANT			
	WEIGHTS & DIMENSIONS			
1	TOTAL WEIGHT		kg	80
2	BASEPLATE FOOTPRINT LENGTH x WIDTH		mm	290X140mm

PACT	TECHNICAL DATA SHEET	Doc. Ref: PACT-2010-NE009-A1001	
		TAG NO.	9310-PU-1163-A/B
		NAME	Flocculant Dosing Pump

	ISSUE	A	B	C	D	E	F	
PROJECT NUMBER:9806J-UNIT 9310	DATE	20-Apr-11	20-Jun-11	8-Oct-11	16-Nov-11			
SERVICE:POTABLE TREATMENT PACKAGE	PURPOSE	HJM	HJM	HJM	HJM			
	CHECKED	SZG	SZG	SZG	SZG			
PLANT	APPROVED	FGH	FGH	FGH	FGH			

	DESCRIPTION		UNITS	DATA	Iss
1	**GENERAL**				
2	MANUFACTURER			Milton Roy	
3	MODEL / SIZE			P766-363SI	
4	LOCATION			IN 40" CONTAINER	
5	PARALLEL OPERATION (YES/NO)			NO	
	OPERATING CONDITIONS				
1	REQUIRED NUMBER			2	
2	OPERATION MODE			1CONTINUOUS OPERATION 1 STANDBY	
3	HAZARDOUS AREA CLASSIFICATION			NON-HAZARDOUS	
4	FLUID PUMPED			FLOCCULANT SOLUTION	
5	FLUID CONCENTRATION		%	10	
6	FLUID CHARACTERISTICS			pH =3(PAC solution)	
7	AMBIENT TEMPERATURE	Min	°C	5	
8		Norm	°C	40	
9		Max	°C	47	
10	FLOW RATE	Norm	l/hr	7.6	
11	HEAD	Norm	bar	3.5	
	PERFORMANCE				
1	CAPACITY	MAX	l/hr	7.6	
2	HEAD	MAX	bar	3.5	
	MATERIALS OF CONSTRUCTION				
1	PUMP SHELL			REINFORCE PP	
2	PUMP HEAD			PVDF	
3	DIAGHRAGM			FLUORINE COMPLEX	
4	VALVE SEAT			PVDF/PTFE	
5	O RING			VITON	
6	HOSE TUBE			PE	
7	BALL OF VALVE			CERAMICS	
	DRIVE ARRANGEMENT				
1	POWER SUPPLY			SINGLE PHASE-230VAC/50HZ	
2	RATED POWER		W	29	
3	PROTECTION CLASS			IP65	
	ACCESSORIES				
1	DN10 HOSE TUBE			10m	
2	DN10 INTRODUCTION VALVE (check valve)			2	
3	DN10 SUCTION VALVE (check valve)			2	
4	DN10 BOTTOM VALVE(check valve)			2	
5	DN10 3-FV VALVE(ball valve)			2	
6	CONTROL MODULE MP-100			2	
	SPARE PART				
1	STANDARD SPARE PART PACKAGE RPM-363				
2	POOL			PVDF/CERAMICS	
3	SPRING			HAYNES ALLOY	
4	O RING			VITON	
5	GASKET			FLUORINE RUBBER	
6	DIAGHRAGM			FLUORINE COMPLEX	
7	SHAFT SEAL			FLUORINE RUBBER	
8	BOLT			SS316	
	SCOPE OF SUPPLY				
1	PUMP				
2	STANDARD SPARE PART PACKAGE				
3	FIRST FILL OF LUBRICANT				
4	HOLDING DOWN BOLTS (ANCHOR BOLTS AND NUTS)				
	WEIGHTS & DIMENSIONS				
1	TOTAL WEIGHT		kg	8.7	

PACT	TECHNICAL DATA SHEET					Doc. Ref: PACT-2010-NE009-A1001		
						TAG NO.	9310-PU-1333、1334-A/B	
						NAME	$Ca(ClO)_2$ Dosing Pump	
		ISSUE	A	B	C	D	E	F
PROJECT NUMBER:9806J-UNIT 9310		DATE	20-Apr-11	20-Jun-11	8-Oct-11	16-Nov-11		
SERVICE:POTABLE TREATMENT PACKAGE		PURPOSE	HJM	HJM	HJM	HJM		
		CHECKED	SZG	SZG	SZG	SZG		
PLANT		APPROVED	FGH	FGH	FGH	FGH		

	DESCRIPTION		UNITS	DATA	Iss
1	**GENERAL**				
2	MANUFACTURER			Milton Roy	
3	MODEL / SIZE			P766-363SI	
4	LOCATION			IN 40" CONTAINER	
5	PARALLEL OPERATION (YES/NO)			NO	
	OPERATING CONDITIONS				
1	REQUIRED NUMBER			3	
2	OPERATION MODE			2CONTINUOUS OPERATION 1 STANDBY	
3	HAZARDOUS AREA CLASSIFICATION			NON-HAZARDOUS	
4	FLUID PUMPED			$Ca(ClO)_2$ SOLUTION	
5	FLUID CONCENTRATION		%	2	
6	FLUID CHARACTERISTICS			pH =7.0	
7	AMBIENT TEMPERATURE	Min	°C	5	
8		Norm	°C	40	
9		Max	°C	47	
10	FLOW RATE	Norm	l/hr	7.6	
11	HEAD	Norm	bar	3.5	
	PERFORMANCE				
1	CAPACITY	MAX	l/hr	7.6	
2	HEAD	MAX	bar	3.5	
	MATERIALS OF CONSTRUCTION				
1	PUMP SHELL			REINFORCE PP	
2	PUMP HEAD			PVDF	
3	DIAGHRAGM			FLUORINE COMPLEX	
4	VALVE SEAT			PVDF/PTFE	
5	O RING			VITON	
6	HOSE TUBE			PE	
7	BALL OF VALVE			CERAMICS	
	DRIVE ARRANGEMENT				
1	POWER SUPPLY			SINGLE PHASE-230VAC/50HZ	
2	RATED POWER		W	29	
3	PROTECTION CLASS			IP65	
	ACCESSORIES				
1	DN10 HOSE TUBE			15m	
2	DN10 INTRODUCTION VALVE (check valve)			3	
3	DN10 SUCTION VALVE (check valve)			3	
4	DN10 BOTTOM VALVE (check valve)			3	
5	DN10 3-FV VALVE(ball valve)			3	
6	CONTROL MODULE MP-100			3	
	SPARE PART				
1	STANDARD SPARE PART PACKAGE RPM-363				
2	POOL			PVDF/CERAMICS	
3	SPRING			HAYNES ALLOY	
4	O RING			VITON	
5	GASKET			FLUORINE RUBBER	
6	DIAGHRAGM			FLUORINE COMPLEX	
7	SHAFT SEAL			FLUORINE RUBBER	
8	BOLT			SS316	
	SCOPE OF SUPPLY				
1	PUMP				
2	STANDARD SPARE PART PACKAGE				
3	FIRST FILL OF LUBRICANT				
4	HOLDING DOWN BOLTS (ANCHOR BOLTS AND NUTS)				
	WEIGHTS & DIMENSIONS				
1	TOTAL WEIGHT		kg	8.7	

PACT	TECHNICAL DATA SHEET				Doc. Ref: PACT-2010-NE005-A1001		
					TAG NO.	9310-HX-1342	
					NAME	Heat Exchanger	
	ISSUE	A	B	C	D	E	F
PROJECT NUMBER:9806J-UNIT 9310	DATE	20-Apr-11	20-Jun-11	8-Oct-11	16-Nov-11		
SERVICE:POTABLE TREATMENT PACKAGE	PURPOSE	HJM	HJM	HJM	HJM		
	CHECKED	SZG	SZG	SZG	SZG		
PLANT	APPROVED	FGH	FGH	FGH	FGH		

	DESCRIPTION		UNITS	DATA	Iss
1	**GENERAL**				
2	MANUFACTURER			ALFA LAVAL	
3	MODEL / SIZE			M6-MFM	
4	LOCATION			IN 40" CONTAINER	
5	PARALLEL OPERATION (YES/NO)			NO	
	OPERATING CONDITIONS				
1	REQUIRED NUMBER			1	
2	OPERATION MODE			CONTINUOUS OPERATION	
3	FLUID PUMPED			POTABLE WATER	
4	FLUID CHARACTERISTICS			pH =6.5-8.5	
5	OPERATING TEMPERATURE	Min	°C	5	
6		Norm	°C	40	
7		Max	°C	47	
12	SPECIFIC GRAVITY OF HOT SIDE		kg/m3	996.7	
13	SPECIFIC GRAVITY OF COLD SIDE		kg/m3	999.5	
14	SPECIFIC HEAT OF HOT SIDE		kJ/kg.°C	4.18	
15	SPECIFIC HEAT OF COLD SIDE		kJ/kg.°C	4.20	
16	INLET VISCOSITY OF HOT SIDE		Cp	0.836	
17	OUTLET VISCOSITY OF HOT SIDE		Cp	1.05	
18	INLET VISCOSITY OF COLD SIDE		Cp	1.31	
19	OUTLET VISCOSITY OF COLD SIDE		Cp	1.14	
20	CHLORIDE CONTENT		ppm	11	
	PERFORMANCE				
1	INLET TEMPEARATURE OF HOT SIDE		°C	28	
2	OUTLET TEMPEARATURE OF HOT SIDE		°C	18.4	
3	INLET TEMPEARATURE OF COLD SIDE		°C	10	
4	OUTLET TEMPEARATURE OF COLD SIDE		°C	15	
5	THERMAL CONDUCTIVITY OF HOT SIDE		w/m.k	0.607	
6	THERMAL CONDUCTIVITY OF COLD SIDE		w/m.k	0.591	
7	FLOW RATE OF HOT WATER		m3/h	6	
8	FIOW RATE OF COLD WATER		m3/h	17.1	
9	PRESSURE DROP OF HOT SIDE		Kpa	19.8	
10	PRESSURE DROP OF COLD SIDE		Kpa	93.4	
11	HEAT LOAD		KW	100	
12	HEAT TRANSFER AREA		m2	2	
13	NUMBER OF PLATES			16	
14	CHANNEL ARRANGEMENT			COUNTERCURRENT	
15	THICKNESS OF PLATE		mm	0.5	

	CONNECTIONS					
1			TYPE	RATING	SIZE	POSITION
2	INLET OF HOT SIDE		ANSI	150lbs	DN50	
3	OUTLET OF HOT SIDE		ANSI	150lbs	DN50	
4	INLET OF COLD SIDE		ANSI	150lbs	DN50	
5	OUTLET OF COLD SIDE		ANSI	150lbs	DN50	
	MATERIALS OF CONSTRUCTION					
1	PLATE MATERIAL		STAINLESS STEEL 316(food grade)			
2	GASKET		EPDM			
	MECHANICAL DATA					
1	HEAT EXCHANGER TYPE		PLATE HEAT EXCHANGER(countercurrent)			
2	DESIGN PRESSURE OF HOT SIDE	Bar g	10			
3	DESIGN PRESSURE OF COLD SIDE	Bar g	10			
4	DESIGN TEMPERATURE OF HOT SIDE	°C	90			
5	DESIGN TEMPERATURE OF COLD SIDE	°C	90			
6	TEST PRESSURE OF HOT SIDE	Bar g	13			
7	TEST PRESSURE OF COLD SIDE	Bar g	13			
	WEIGHTS & DIMENSIONS					
1	TOTAL WEIGHT WITH WATER	kg	124			
2	BASEPLATE FOOTPRINT LENGTH x WIDTH	mm	585×320x920			

TECHNICAL DATA SHEET

Doc. Ref: PACT-2010-NE005-A1001	
TAG NO.	9310-MX-1332
NAME	$Ca(ClO)_2$ Solution Mixer

	ISSUE	A	B	C	D	E	F
PROJECT NUMBER:9806J-UNIT 9310	DATE	20-Apr-11	20-Jun-11	8-Oct-11	16-Nov-11		
SERVICE:POTABLE TREATMENT PACKAGE	PURPOSE	HJM	HJM	HJM	HJM		
	CHECKED	SZG	SZG	SZG	SZG		
PLANT	APPROVED	FGH	FGH	FGH	FGH		

	DESCRIPTION		UNITS	DATA	Iss
1	**GENERAL**				
2	MANUFACTURER			YANGTSE	
3	MODEL / SIZE			RXF67-A130/150-900CR1	
4	LOCATION			IN 40" CONTAINER	
5	PARALLEL OPERATION (YES/NO)			No	
	OPERATING CONDITIONS				
1	REQUIRED NUMBER			1	
2	OPERATION MODE			CONTINUOUS OPERATION	
3	HAZARDOUS AREA CLASSIFICATION			NON-HAZARDOUS	
4	FLUID PUMPED			$Ca(ClO)_2$ SOLUTION	
5	FLUID CONCENTRATION		%	1	
6	FLUID CHARACTERISTICS			pH =8-10	
7	OPERATING TEMPERATURE	Min	°C	5	
8		Norm	°C	40	
9		Max	°C	47	
10	SPECIFIC GRAVITY @ PUMPING TEMPERATURE			1	
11	VISCOSITY @ PUMPING TEMPERATURE		mpa.s	20	
12	INSTALLATION METHOD			Top entry	
	TANK DATA				
1	TANK TAG NO.			9310-TK-1331	
2	TANK MATERIAL OF TANK			HDPE	
3	DIMENSION OF THE TANK RETENTION		mm	600	
4	THE USEFUL CAPACITY OF THE TANK		L	250	
5	TANK OVERALL HEIGHT		mm	1100	
6	WATER LEVEL OF TANK	Min	mm	100	
7		Norm	mm	100<LEVEL<700	
8		Max	mm	700	
9	BAFFLE			NO	
	MENCHNICAL DATE				
1	TYPE OF AGITATOR			VERTICAL AGITAOR	
2	TYPE OF IMPELLER			RXF67-A130/150-900CR1	
3	DIAMETER OF IMPELLER		mm	150	
4	NUMBER OF IMPELLER			1	
5	NUMBER OF BLADE			2	
6	LENGTH OF SHAFT		mm	900	
7	DIAMETER OF SHAFT		mm	60	
8	SPEED OF AGITATOR		rev / min	292	
9	LUBRICATION METHOD			Lubricating Oil	
10	LUBIRCANT			Shell Omala 220	
	MATERIALS OF CONSTRUCTION				
1	STIRRER			CARBON STEEL WITH RUBBER	
2	SHAFT			CARBON STEEL WITH RUBBER	
3	COUPLER			CARBON STEEL WITH RUBBER	
4	INTALLATION			CARBON STEEL WITH RUBBER	
5	REDUCTION GEARS			COMBINATION	
	DRIVE ARRANGEMENT OF DRIVING DEVICE				
1	DRIVER TYPE			ELECTRIC	
2	DRIVER MANUFACTURER			ABB	
3	POWER SUPPLY			3PHASE-400VAC/50HZ	
4	RATED POWER / SPEED		kw / rpm	0.18/300	
5	INGRESS PROTECTION CLASS			IP55	
6	INSULATION CLASS / TEMPERATURE RISE			F/B	
7	MOTOR DUTY TYPE			Continuous Running Duty	
8	MOTOR COOLING METHOD			IC 411	
9	REDUCER MANUFACTURER			SEW	
10	REDUCER RATIO			100	
	WEIGHTS & DIMENSIONS				
1	TOTAL WEIGHT		KG	47	
2	TOTAL OPERATION WEIGHT		KG	50	

TECHNICAL DATA SHEET

Doc. Ref: PACT-2010-NE005-A1001	
TAG NO.	9310-MX-1162
NAME	Flocculant Mixer

	ISSUE	A	B	C	D	E	F
PROJECT NUMBER:9806J-UNIT 9310	DATE	20-Apr-11	20-Jun-11	8-Oct-11	16-Nov-11		
SERVICE:POTABLE TREATMENT PACKAGE	PURPOSE	HJM	HJM	HJM	HJM		
	CHECKED	SZG	SZG	SZG	SZG		
PLANT	APPROVED	FGH	FGH	FGH	FGH		

	DESCRIPTION		UNITS	DATA	Iss
1	**GENERAL**				
2	MANUFACTURER			YANGTSE	
3	MODEL / SIZE			RXF67-A130/150-900CR1	
4	LOCATION			IN 40" CONTAINER	
5	PARALLEL OPERATION (YES/NO)			No	
	OPERATING CONDITIONS				
1	REQUIRED NUMBER			1	
2	OPERATION MODE			CONTINUOUS OPERATION	
3	HAZARDOUS AREA CLASSIFICATION			NON-HAZARDOUS	
4	FLUID PUMPED			FLOCCULANT SOLUTION	
5	FLUID CONCENTRATION		%	10	
6	FLUID CHARACTERISTICS			pH =3(PAC solution)	
7	OPERATING TEMPERATURE	Min	°C	5	
8		Norm	°C	40	
9		Max	°C	47	
10	SPECIFIC GRAVITY @ PUMPING TEMPERATURE			1.1	
11	VISCOSITY @ PUMPING TEMPERATURE		mpa.s	50	
12	INSTALLATION METHOD			Top entry	
	TANK DATA				
1	TANK TAG NO.			9310-TK-1161	
2	TANK MATERIAL OF TANK			HDPE	
3	DIMENSION OF THE TANK RETENTION		mm	600	
4	THE USEFUL CAPACITY OF THE TANK		L	250	
5	TANK OVERALL HEIGHT		mm	1100	
6	WATER LEVEL OF TANK	Min	mm	100	
7		Norm	mm	100<LEVEL<700	
8		Max	mm	700	
9	BAFFLE			NO	
	MENCHNICAL DATE				
1	TYPE OF AGITATOR			VERTICAL AGITAOR	
2	TYPE OF IMPELLER			RXF67-A130/150-900CR1	
3	DIAMETER OF IMPELLER		mm	150	
4	NUMBER OF IMPELLER			1	
5	NUMBER OF BLADE			2	
6	LENGTH OF SHAFT		mm	900	
7	DIAMETER OF SHAFT		mm	60	
8	SPEED OF AGITATOR		rev / min	292	
9	LUBRICATION METHOD			Lubricating Oil	
10	LUBIRCANT			Shell Omala 220	
	MATERIALS OF CONSTRUCTION				
1	STIRRER			CARBON STEEL WITH RUBBER	
2	SHAFT			CARBON STEEL WITH RUBBER	
3	COUPLER			CARBON STEEL WITH RUBBER	
4	INTALLATION			CARBON STEEL WITH RUBBER	
5	REDUCTION GEARS			COMBINATION	
	DRIVE ARRANGEMENT OF DRIVING DEVICE				
1	DRIVER TYPE			ELECTRIC	
2	DRIVER MANUFACTURER			ABB	
3	POWER SUPPLY			3PHASE-400VAC/50HZ	
4	RATED POWER / SPEED		kw / rpm	0.18/300	
5	INGRESS PROTECTION CLASS			IP55	
6	INSULATION CLASS / TEMPERATURE RISE			F/B	
7	MOTOR DUTY TYPE			Continuous Running Duty	
8	MOTOR COOLING METHOD			IC 411	
9	REDUCER MANUFACTURER			SEW	
10	REDUCER RATIO			100	
	WEIGHTS & DIMENSIONS				
1	TOTAL WEIGHT		KG	47	
2	TOTAL OPERATION WEIGHT		KG	50	

	TECHNICAL DATA SHEET	Doc. Ref: PACT-2010-NE009-A1001
		TAG NO. 9310-CO-1341
		NAME Chiller

	ISSUE	A	B	C	D	E	F
PROJECT NUMBER:9806J-UNIT 9310	DATE	20-Apr-11	20-Jun-11	8-Oct-11	16-Nov-11		
SERVICE:POTABLE TREATMENT PACKAGE	PURPOSE	HJM	HJM	HJM	HJM		
	CHECKED	SZG	SZG	SZG	SZG		
PLANT	APPROVED	FGH	FGH	FGH	FGH		

	DESCRIPTION	UNITS	DATA	Iss
1	**General**			
2	Manufacturer		Carrier	
3	Model / Size		30RB060	
4	Location		OUTDOORS(UNDER SHELTER)	
5	Parallel Operation (YES/NO)		NO	
	Information			
1	Quantity		1	
2	Refrigerant		R410A	
3	Filling Load	kg	15	
4	Shipping Weight	kg	546	
5	Operation Weight	kg	545	
6	Length	mm	2109	
7	Width	mm	1090	
8	Height	mm	1321	
	Eaaporator Information			
4	Fluid Type		Fresh Water	
5	Fouling Factor	(sqm-K)/kw	0.018	
5	Leaving Temperature	°C	10.0	
6	Entering Temperature	°C	15.0	
6	Fluid Flow	L/s	2.7	
7	Pressure Drop	kPa	50.9	
	Condenser Information			
1	Altitude	m	0	
2	Number of Fans		1	
3	Total Condenser Fan Air Flow	L/s	3800	
4	Entering Air Temperature	°C	45.0	
	Integrated Pump Information			
1	Dynamic Head at Pump	kPa	257.5	
	Dynamic Head External to Chiller	kPa	206.6	
	Performance Information			
1	Cooling Capacity	KW	55.8 @ 45°C	
2	Total Compressor Power	KW	24.8	
3	Total Fan Motor Power	KW	0.67	
4	Pump Power	KW	1.31	
5	Total Unit Power (without pump)	KW	25.4	
6	Total Unit Power (with pump)	KW	26.7	
	Efficiency (without pump)	COP	2.19	
	A-Weighted Sound Pressure Level	dbA	64 at 1 meter	
	Electrical Information			
1	Voltage	V-Ph-Hz	400-3-50	
2	Standby Power	KW	1.4	
3	Minimum Voltage	Volts	360	
4	Maximum Voltage	Volts	440	
5	Power Factor		0.83	

Amps(Un)	Electrical Circuit 1	Electrical Circuit 2
Max Unit Current Draw (RLA)	50.7	
Max Start Up Current(ICF)	145.8	
Nominal Unit Current Draw(A)	40.7	
Accessories and installed Options		
Standard High Pressure Single Pump		

All performance efficiency data are without pump

Certified in accordance with Water Chilling(heat pump) Packages using the Vapor Compression Cycle Certification Program,which is based on GB/T 18430.1-2007

Sound pressure level measured in accordance with JBT4330.Sound pressure level is the data when the unit is placed in a free filed over a reflecting plane.

PACT	TECHNICAL DATA SHEET				Doc. Ref: PACT-2010-NE009-A1001			
					TAG NO.	9310-TK-1300-A		
					NAME	POTABLE WATER TANK		
		ISSUE	A	B	C	D	E	F
PROJECT NUMBER:9806J-UNIT 9310		DATE	20-Apr-11	20-Jun-11	8-Oct-11	16-Nov-11		
SERVICE:POTABLE TREATMENT PACKAGE		PURPOSE	HJM	HJM	HJM	HJM		
		CHECKED	SZG	SZG	SZG	SZG		
PLANT		APPROVED	FGH	FGH	FGH	FGH		

	DESCRIPTION	UNITS	DATA	Iss
1	**General**			
2	Manufacturer		Linan Huitong Fiber	
3	Model / Size		DN3600x5200	
4	Location		OUTDOORS	
5	Parallel Operation (YES/NO)		YES	
	Process Date			
1	Type		Atmospheric Pressure Vessel	
2	Operating Pressure	bar	ATM	
3	Design Pressure	bar	ATM	
4	Operating Temperature	℃	5~47	
5	Design Temperature	℃	50	
6	Quantity		1	
7	Fluid Name		Potable Water	
8	Fluid Density	kg/m^3	1000	
9	Fluid Viscosity	cp	0.986	
10	Shipping Weight	kg	3000	
11	Operation Weight	kg	53000	
12	Diameter	mm	3600	
13	Height	mm	5200	
14	Corrosion Allowance	mm	0	
15	Main p. p. Material		FRP	
16	Fluid Type		Liquid	
17	Total Volume	m^3	50	
18	Insulation Material		Polyurethane	
19	Insulation Thickness	mm	50	
20	Wind Pressure	pa	550	
21	Ear Intensity		0	

Equipment Nozzle Schedule

Mark	Size	Connection Standard	Flange Type	Face	Service	Length	Remark
1300-I-01-A	DN100	ASME B16.5 CLASS 150	WN	RF	INLET	150	
1300-I-02-A	DN50	ASME B16.5 CLASS 150	WN	RF	INLET	150	
1300-O-01-A	DN80	ASME B16.5 CLASS 150	WN	RF	OVER FLOW	150	
1300-O-02-A	DN150	ASME B16.5 CLASS 150	WN	RF	OUTLET	150	
1300-S-01-A	DN100	ASME B16.5 CLASS 150	WN	RF	SPARE	150	WITH BIND FLANGE
1300-V-01-A	DN40	ASME B16.5 CLASS 150	WN	RF	VENT	150	
1300-L-01-A	DN100	ASME B16.5 CLASS 150	WN	RF	LEVEL	150	
1300-D-01-A	DN80	ASME B16.5 CLASS 150	WN	RF	DRAIN	150	
1300-WN-01-A	DN600	ASME B16.5 CLASS 150	WN	RF	MANHOLE	200	

Note:

1.Length is The distance that from the surface of the equipment to the face of the nozzle flange

2.The anchorage are chemical bolts , and will be supplied by PACT.

PACT	TECHNICAL DATA SHEET	Doc. Ref: PACT-2010-NE009-A1001
		TAG NO. 9310-TK-1300-B
		NAME POTABLE WATER TANK

	ISSUE	A	B	C	D	E	F
PROJECT NUMBER:9806J-UNIT 9310	DATE	20-Apr-11	20-Jun-11	8-Oct-11	16-Nov-11		
SERVICE:POTABLE TREATMENT PACKAGE	PURPOSE	HJM	HJM	HJM	HJM		
	CHECKED	SZG	SZG	SZG	SZG		
PLANT	APPROVED	FGH	FGH	FGH	FGH		

	DESCRIPTION	UNITS	DATA	Iss
1	**General**			
2	Manufacturer		Linan Huitong Fiber	
3	Model / Size		DN3600x5200	
4	Location		OUTDOORS	
5	Parallel Operation (YES/NO)		YES	
	Process Date			
1	Type		Atmospheric Pressure Vessel	
2	Operating Pressure	bar	ATM	
3	Design Pressure	bar	ATM	
4	Operating Temperature	℃	5~47	
5	Design Temperature	℃	50	
6	Quantity		1	
7	Fluid Name		Potable Water	
8	Fluid Density	kg/m^3	1000	
9	Fluid Viscosity	cp	0.986	
10	Shipping Weight	kg	3000	
11	Operation Weight	kg	53000	
12	Diameter	mm	3600	
13	Height	mm	5200	
14	Corrosion Allowance	mm	0	
15	Main p. p. Material		FRP	
16	Fluid Type		Liquid	
17	Total Volume	m^3	50	
18	Insulation Material		Polyurethane	
19	Insulation Thickness	mm	50	
20	Wind Pressure	pa	550	
21	Ear Intensity		0	

Equipment Nozzle Schedule

Mark	Size	Connection Standard	Flange Type	Face	Service	Length	Remark
1300-I-01-B	DN100	ASME B16.5 CLASS 150	WN	RF	INLET	150	
1300-I-02-B	DN50	ASME B16.5 CLASS 150	WN	RF	INLET	150	
1300-O-01-B	DN80	ASME B16.5 CLASS 150	WN	RF	OVER FLOW	150	
1300-O-02-B	DN150	ASME B16.5 CLASS 150	WN	RF	OUTLET	150	
1300-S-01-B	DN100	ASME B16.5 CLASS 150	WN	RF	SPARE	150	WITH BIND FLANGE
1300-V-01-B	DN40	ASME B16.5 CLASS 150	WN	RF	VENT	150	
1300-L-01-B	DN100	ASME B16.5 CLASS 150	WN	RF	LEVEL	150	
1300-D-01-B	DN80	ASME B16.5 CLASS 150	WN	RF	DRAIN	150	
1300-WN-01-B	DN600	ASME B16.5 CLASS 150	WN	RF	MANHOLE	200	

Note:

1.Length is The distance that from the surface of the equipment to the face of the nozzle flange

2.The anchorage are chemical bolts , and will be supplied by PACT.

PACT	TECHNICAL DATA SHEET	Doc. Ref: PACT-2010-NE009-A1001
		TAG NO. 9310-TK-1100
		NAME WELL WATER TANK

	ISSUE	A	B	C	D	E	F
PROJECT NUMBER:9806J-UNIT 9310	DATE	20-Apr-11	20-Jun-11	8-Oct-11	16-Nov-11		
SERVICE:POTABLE TREATMENT PACKAGE	PURPOSE	HJM	HJM	HJM	HJM		
	CHECKED	SZG	SZG	SZG	SZG		
PLANT	APPROVED	FGH	FGH	FGH	FGH		

	DESCRIPTION	UNITS	DATA	Iss
1	**General**			
2	Manufacturer		Linan Huitong Fiber	
3	Model / Size		DN3600x5200	
4	Location		OUTDOORS	
5	Parallel Operation (YES/NO)		NO	
	Process Date			
1	Type		Atmospheric Pressure Vessel	
2	Operating Pressure	bar	ATM	
3	Design Pressure	bar	ATM	
4	Operating Temperature	℃	5~47	
5	Design Temperature	℃	50	
6	Quantity		1	
7	Fluid Name		Well Water	
8	Fluid Density	kg/m^3	1000	
9	Fluid Viscosity	cp	0.986	
10	Shipping Weight	kg	3000	
11	Operation Weight	kg	53000	
12	Diameter	mm	3600	
13	Height	mm	5200	
14	Corrosion Allowance	mm	0	
15	Main p. p. Material		FRP	
16	Fluid Type		Liquid	
17	Total Volume	m^3	50	
18	Insulation Material		Polyurethane	
19	Insulation Thickness	mm	50	
20	Wind Pressure	pa	550	
21	Ear Intensity		0	

Equipment Nozzle Schedule

Mark	Size	Connection Standard	Flange Type	Face	Service	Length	Remark
1300-I-01	DN100	ASME B16.5 CLASS 150	WN	RF	INLET	150	
1300-I-02	DN32	ASME B16.5 CLASS 150	WN	RF	INLET	150	
1300-O-01	DN100	ASME B16.5 CLASS 150	WN	RF	OVER FLOW	150	
1300-O-02	DN100	ASME B16.5 CLASS 150	WN	RF	OUTLET	150	
1300-S-01	DN40	ASME B16.5 CLASS 150	WN	RF	SPARE	150	WITH BIND FLANGE
1300-V-01	DN40	ASME B16.5 CLASS 150	WN	RF	VENT	150	
1300-L-01	DN100	ASME B16.5 CLASS 150	WN	RF	LEVEL	150	
1300-D-01	DN80	ASME B16.5 CLASS 150	WN	RF	DRAIN	150	
1300-WN-01	DN600	ASME B16.5 CLASS 150	WN	RF	MANHOLE	200	

Note:
1.Length is The distance that from the surface of the equipment to the face of the nozzle flange
2.The anchorage are chemical bolts , and will be supplied by PACT.

	TECHNICAL DATA SHEET	Doc. Ref: PACT-2010-NE009-A1001
		TAG NO. 9310-TK-1250
		NAME BACKWASH REJECT WATER TANK

	ISSUE	A	B	C	D	E	F
PROJECT NUMBER:9806J-UNIT 9310	DATE	20-Apr-11	20-Jun-11	8-Oct-11	16-Nov-11		
SERVICE:POTABLE TREATMENT PACKAGE	PURPOSE	HJM	HJM	HJM	HJM		
	CHECKED	SZG	SZG	SZG	SZG		
PLANT	APPROVED	FGH	FGH	FGH	FGH		

	DESCRIPTION	UNITS	DATA	Iss
1	**General**			
2	Manufacturer		Linan Huitong Fiber	
3	Model / Size		DN2800x1900	
4	Location		OUTDOORS	
5	Parallel Operation (YES/NO)		NO	
	Process Date			
1	Type		Atmospheric Pressure Vessel	
2	Operating Pressure	bar	ATM	
3	Design Pressure	bar	ATM	
4	Operating Temperature	℃	5~47	
5	Design Temperature	℃	50	
6	Quantity		1	
7	Fluid Name		Backwash Reject Water	
8	Fluid Density	kg/m^3	1000	
9	Fluid Viscosity	cp	0.986	
10	Shipping Weight	kg	1000	
11	Operation Weight	kg	11000	
12	Diameter	mm	2800	
13	Height	mm	1900	
14	Corrosion Allowance	mm	0	
15	Main p. p. Material		FRP	
16	Fluid Type		Liquid	
17	Total Volume	m^3	10	
18	Insulation Material		Polyurethane	
19	Insulation Thickness	mm	50	
20	Wind Pressure	pa	550	
21	Ear Intensity		0	

Equipment Nozzle Schedule

Mark	Size	Connection Standard	Flange Type	Face	Service	Length	Remark
1300-I-01	DN50	ASME B16.5 CLASS 150	WN	RF	INLET	150	
1300-I-02	DN50	ASME B16.5 CLASS 150	WN	RF	INLET	150	
1300-I-03	DN100	ASME B16.5 CLASS 150	WN	RF	INLET	150	
1300-O-01	DN50	ASME B16.5 CLASS 150	WN	RF	OUTLET	150	
1300-O-02	DN80	ASME B16.5 CLASS 150	WN	RF	OVER FLOW	150	
1300-S-01	DN50	ASME B16.5 CLASS 150	WN	RF	SPARE	150	WITH BIND FLANGE
1300-V-01	DN40	ASME B16.5 CLASS 150	WN	RF	VENT	150	
1300-L-01	DN100	ASME B16.5 CLASS 150	WN	RF	LEVEL	150	
1300-D-01	DN80	ASME B16.5 CLASS 150	WN	RF	DRAIN	150	
1300-WN-01	DN600	ASME B16.5 CLASS 150	WN	RF	MANHOLE	200	

Note:

1.Length is The distance that from the surface of the equipment to the face of the nozzle flange

2.The anchorage are chemical bolts , and will be supplied by PACT.

PACT	TECHNICAL DATA SHEET	Doc. Ref: PACT-2010-NE009-A1001
		TAG NO. 9310-TK-1331
		NAME $Ca(ClO)_2$ STORAGE TANK

	ISSUE	A	B	C	D	E	F
PROJECT NUMBER:9806J-UNIT 9310	DATE	20-Apr-11	20-Jun-11	8-Oct-11	16-Nov-11		
SERVICE:POTABLE TREATMENT PACKAGE	PURPOSE	HJM	HJM	HJM	HJM		
	CHECKED	SZG	SZG	SZG	SZG		
PLANT	APPROVED	FGH	FGH	FGH	FGH		

	DESCRIPTION	UNITS	DATA	Iss
1	**General**			
2	Manufacturer		Allibert	
3	Model / Size		DN600x1100	
4	Location		IN 40"Container	
5	Parallel Operation (YES/NO)		NO	
	Process Date			
1	Type		Atmospheric Pressure Vessel	
2	Operating Pressure	bar	ATM	
3	Design Pressure	bar	ATM	
4	Operating Temperature	℃	5~47	
5	Design Temperature	℃	50	
6	Quantity		1	
7	Fluid Name		Ca(ClO)2 Solution	
8	Fluid Density	kg/m^3	1000	
9	Fluid Viscosity	cp	0.986	
10	Shipping Weight	kg	60	
11	Operation Weight	kg	300	
12	Diameter	mm	600	
13	Height	mm	1100	
14	Corrosion Allowance	mm	0	
15	Main p. p. Material		HDPE	
16	Fluid Type		Liquid	
17	Total Volume	m^3	0.25	
18	Insulation Material		N/A	
19	Insulation Thickness	mm	0	
20	Wind Pressure	pa		
21	Ear Intensity		0	

Equipment Nozzle Schedule

Mark	Size	Connection Standard	Flange Type	Face	Service	Length	Remark
1300-I-01	DN20	ASME B16.5 CLASS 150	PL	FF	INLET	100	
1300-I-02	DN20	ASME B16.5 CLASS 150	PL	FF	INLET	100	
1300-I-03	DN80			FF	INLET	HOLE	It is juat a hole for the pipe in
1300-O-01	DN50			FF	OUTLET	HOLE	It is juat a hole for the pipe in
1300-O-02	DN40	ASME B16.5 CLASS 150	PL	FF	OVER FLOW	100	
1300-V-01	DN25	ASME B16.5 CLASS 150	PL	FF	VENT	100	
1300-L-01	DN100	ASME B16.5 CLASS 150	PL	FF	LEVEL	100	
1300-D-01	DN25	ASME B16.5 CLASS 150	PL	FF	DRAIN	100	
1300-AS-01	DN150			FF	MANHOLE	HOLE	It is juat a hole for the mixer in

Note:

1.Length is The distance that from the surface of the equipment to the face of the nozzle flange

2.PL is the short name of the Plate flange,because the material of the equipment is HDPE, so the flange is the type of plate flange.

PACT	TECHNICAL DATA SHEET				Doc. Ref: PACT-2010-NE009-A1001			
					TAG NO.	9310-TK-1161		
					NAME	Flocculant STORAGE TANK		
		ISSUE	A	B	C	D	E	F
PROJECT NUMBER:9806J-UNIT 9310		DATE	20-Apr-11	20-Jun-11	8-Oct-11	16-Nov-11		
SERVICE:POTABLE TREATMENT PACKAGE		PURPOSE	HJM	HJM	HJM	HJM		
		CHECKED	SZG	SZG	SZG	SZG		
PLANT		APPROVED	FGH	FGH	FGH	FGH		

	DESCRIPTION	UNITS	DATA	Iss
1	**General**			
2	Manufacturer		Allibert	
3	Model / Size		DN600x1100	
4	Location		IN 40"Container	
5	Parallel Operation (YES/NO)		NO	
	Process Date			
1	Type		Atmospheric Pressure Vessel	
2	Operating Pressure	bar	ATM	
3	Design Pressure	bar	ATM	
4	Operating Temperature	℃	5~47	
5	Design Temperature	℃	50	
6	Quantity		1	
7	Fluid Name		Flocculant Solution	
8	Fluid Density	kg/m^3	1000	
9	Fluid Viscosity	cp	0.986	
10	Shipping Weight	kg	60	
11	Operation Weight	kg	300	
12	Diameter	mm	600	
13	Height	mm	1100	
14	Corrosion Allowance	mm	0	
15	Main p. p. Material		HDPE	
16	Fluid Type		Liquid	
17	Total Volume	m^3	0.25	
18	Insulation Material		N/A	
19	Insulation Thickness	mm	0	
20	Wind Pressure	pa	0	
21	Ear Intensity		0	

Equipment Nozzle Schedule

Mark	Size	Connection Standard	Flange Type	Face	Service	Length	Remark
1300-I-01	DN20	ASME B16.5 CLASS 150	PL	FF	INLET	100	
1300-I-02	DN20	ASME B16.5 CLASS 150	PL	FF	INLET	100	
1300-I-03	DN80			FF	INLET	HOLE	It is juat a hole for the pipe in
1300-O-01	DN50			FF	OUTLET	HOLE	It is juat a hole for the pipe in
1300-O-02	DN40	ASME B16.5 CLASS 150	PL	FF	OVER FLOW	100	
1300-V-01	DN25	ASME B16.5 CLASS 150	PL	FF	VENT	100	
1300-L-01	DN100	ASME B16.5 CLASS 150	PL	FF	LEVEL	100	
1300-D-01	DN25	ASME B16.5 CLASS 150	PL	FF	DRAIN	100	
1300-AS-01	DN150			FF	MANHOLE	HOLE	It is juat a hole for the mixer in

Note:

1.Length is The distance that from the surface of the equipment to the face of the nozzle flange

2.PL is the short name of the Plate flange,because the material of the equipment is HDPE, so the flange is the type of plate flange.

PACT	TECHNICAL DATA SHEET				Doc. Ref: PACT-2010-NE009-A1001			
					TAG NO.	9310-FL-1200		
					NAME	SAND FILTER		
		ISSUE	A	B	C	D	E	F
PROJECT NUMBER:9806J-UNIT 9310		DATE	20-Apr-11	20-Jun-11	8-Oct-11	16-Nov-11		
SERVICE:POTABLE TREATMENT PACKAGE		PURPOSE	HJM	HJM	HJM	HJM		
		CHECKED	SZG	SZG	SZG	SZG		
PLANT		APPROVED	FGH	FGH	FGH	FGH		

	DESCRIPTION	UNITS	DATA	Iss
1	**General**			
2	Design		WUXI BAOFENG PETROCHEMICAL EQUIPMENT CO;LTD	
3	Manufacturer		WUXI BAOFENG PETROCHEMICAL EQUIPMENT CO;LTD	
4	Inspection cade		JB/T2939-1999(Specification For Water treatment Equipment)	
5	Model / Size		DN800x2390	
6	Location		IN 40"Container	
7	Parallel Operation (YES/NO)		NO	
	Process Date			
1	Type		Pressure Vessel	
2	Filtration media		Quartz Sand	
3	Quantity of the Filtration media	m^3	0.7	
4	Internal		Fixed Distributor	
5	Operating Pressure	bar	0.43	
6	Design Pressure	bar	0.6	
7	Operating Temperature	℃	5~47	
8	Design Temperature	℃	50	
9	Quantity		1	
10	Fluid Name		Potable Water	
11	Fluid Density	kg/m^3	1000	
12	Fluid Viscosity	cp	0.986	
13	Shipping Weight	kg	2050	
14	Operation Weight	kg	3050	
15	Diameter	mm	800	
16	Height	mm	2390	
17	Corrosion Allowance	mm	0	
18	Main p. p. Material		carbon steel vessel with rubber liner inside	
19	Fluid Type		Liquid	
20	Total Volume	m^3	1	
21	Insulation Material		N/A	
22	Insulation Thickness	mm	0	
23	Wind Pressure	pa	0	
24	Ear Intensity		0	

Equipment Nozzle Schedule

Mark	Size	Connection Standard	Flange Type	Face	Service	Length	Remark
1200-I-01	DN80	ASME B16.5 CLASS 150	WN	RF	INLET	100	
1200-O-01	DN80	ASME B16.5 CLASS 150	WN	RF	OUTLET	100	
1200-W-01	370X150		WN	RF	SIGHTGLASS	200	
1200-H-01	DN125	ASME B16.5 CLASS 150	WN	RF	HANDHOLE	100	WITH BIND FLANGE
1200-V-01	DN50	ASME B16.5 CLASS 150	WN	RF	VENT	100	

Note:

1.Length is The distance that from the surface of the equipment to the face of the nozzle flange

PACT	TECHNICAL DATA SHEET				Doc. Ref: PACT-2010-NE009-A1001			
					TAG NO.	9310-FL-1420		
					NAME	CARBON FILTER		
		ISSUE	A	B	C	D	E	F
PROJECT NUMBER:9806J-UNIT 9310		DATE	20-Apr-11	20-Jun-11	8-Oct-11	16-Nov-11		
SERVICE:POTABLE TREATMENT PACKAGE		PURPOSE	HJM	HJM	HJM	HJM		
		CHECKED	SZG	SZG	SZG	SZG		
PLANT		APPROVED	FGH	FGH	FGH	FGH		

	DESCRIPTION	UNITS	DATA	Iss
1	**General**			
2	Design		WUXI BAOFENG PETROCHEMICAL EQUIPMENT CO;LTD	
3	Manufacturer		WUXI BAOFENG PETROCHEMICAL EQUIPMENT CO;LTD	
4	Inspection cade		JB/T2939-1999(Specification For Water treatment Equipment)	
5	Model / Size		DN1400x2493	
6	Location		IN 40"Container	
7	Parallel Operation (YES/NO)		NO	
	Process Date			
1	Type		Pressure Vessel	
2	Filtration media		Activated Carbon	
3	Quantity of the Filtration media	m^3	2	
4	Internal		Fixed Distributor	
5	Operating Pressure	bar	0.43	
6	Design Pressure	bar	0.6	
7	Operating Temperature	℃	5~47	
8	Design Temperature	℃	50	
9	Quantity		1	
10	Fluid Name		Potable Water	
11	Fluid Density	kg/m^3	1000	
12	Fluid Viscosity	cp	0.986	
13	Shipping Weight	kg	1850	
14	Operation Weight	kg	3850	
15	Diameter	mm	1400	
16	Height	mm	2493	
17	Corrosion Allowance	mm	0	
18	Main p. p. Material		carbon steel vessel with rubber liner inside	
19	Fluid Type		Liquid	
20	Total Volume	m^3	2	
21	Insulation Material		N/A	
22	Insulation Thickness	mm	0	
23	Wind Pressure	pa	0	
24	Ear Intensity		0	

Equipment Nozzle Schedule

Mark	Size	Connection Standard	Flange Type	Face	Service	Length	Remark
1420-I-01	DN100	ASME B16.5 CLASS 150	WN	RF	INLET	100	
1420-O-01	DN100	ASME B16.5 CLASS 150	WN	RF	OUTLET	100	
1420-W-01	370X150		WN	RF	SIGHTGLASS	200	
1420-H-01	DN125	ASME B16.5 CLASS 150	WN	RF	HANDHOLE	100	WITH BIND FLANGE
1420-MW-01	DN500	ASME B16.5 CLASS 150	WN	RF	MANHOLE	200	
1420-V-01	DN50	ASME B16.5 CLASS 150	WN	RF	VENT	100	

Note:

1.Length is The distance that from the surface of the equipment to the face of the nozzle flange

	TECHNICAL DATA SHEET	Doc. Ref: PACT-2010-NE009-A1001					
		TAG NO.	9310-SH-1500				
		NAME	Safety Shower and Eyewasher				
	ISSUE	A	B	C	D	E	F
PROJECT NUMBER:9806J-UNIT 9310	DATE	20-Jun-11	8-Oct-11	16-Nov-11			
SERVICE:POTABLE TREATMENT PACKAGE	PURPOSE	HJM	HJM	HJM			
	CHECKED	SZG	SZG	SZG			
PLANT	APPROVED	FGH	FGH	FGH			

OPERATING CONDITIONS

1. Fluid description : potable water

Function : safety for operator

Operate Temperature(°C) : 5-47

Min Pressure: 2bar

Max Pressure: 8bar

Max Flowrate:114L/Min

2. Location : in 40" container

CONSTRUCTION FEATURES

1. Number : 1

2. Manufacturer :Bradi

3. Type : BD-5600

4. Material specification

5.Standard：Z358.1 ANSI

Material of construction:stainless steel 304

4.Dimensions : Inlet 1-1/4" thread, Outlet 1-1/4" thread

5.Net weight:14.8kg

6.Gross weight:15.8kg

7.Overall dimension of the safety shower:φ260mm

8.Overall dimension of the eye wash:φ260mm

9.The height of the safety shower:2240mm

10.The height of the eye wash:1010mm

11.The total height of the equipment:2340mm

	TECHNICAL DATA SHEET	Doc. Ref: PACT-2010-NE009-A1001	
		TAG NO.	9310-PU-1335
		NAME	DRUM PUMP

	ISSUE		A	B	C	D	E	F
PROJECT NUMBER:	DATE		20-Jun-11	8-Oct-11	16-Nov-11			
SERVICE:	PURPOSE		HJM	HJM	HJM			
	CHECKED		SZG	SZG	SZG			
PLANT	APPROVED		FGH	FGH	FGH			

	DESCRIPTION	UNITS	DATA
1	**General**		
2	Manufacturer		FTI
3	Model / Size		PFP-40-M5V
4	Location		potable
5			
	Information		
1	Quantity		1
2	Max temperature	℃	71
3			
	Tube Specification		
	Model		PFP-40-M5V
	Tube Material		Polypropylene
	Tube Diameter	㎜	51
	Tube Length	㎜	1020
	Seal		Sealless
	Shaft		Alloy
	Internals		Polypro
	Hose Size Required		1''
	Motor Specifications		
	ODP (Open Drip Proof) IP24 Motors		
	Model		M5V
	Type		Universal-Variable Speed
	Certifications		CE
	Electrical Requirements		230VAC/50-60Hz
	Input W		650
	RPM		3500-10000
	Max Viscosity Cp		500

Note: When pumping flammables or combustibles, use explosionproof electric or non-electric (air) motors on stainless steel tubes with a static protection kit.

*Suitable for 230V, 60 Hz. Includes a NEMA 6-15 plug.

**Motor suitable for hazardous areas that do not require independent certification.

***Recommended for pumping non-flammables in an explosionproof environment.

****An air motor is a non-electrical device which means the possibility of explosion from igniting flammables or combustibles is reduced. Air motor performance will depend upon user's compressor and system set up.

APPENDIX C

POTABLE WATER TREATMENT PLANT

MOTOR DATA SHEETS

PACT	Electric Motor Data Sheets					Doc. Ref: PACT-2010-NE009-A4102-RevD		
						TAG NO.	9310-PU-1110-M	
						NAME	Water Treatment Feed Pump	
		ISSUE	A	B	C	D	E	F
PROJECT NUMBER:9806J-UNIT 9310		DATE	13-Jul-11	30-Dec-11				
SERVICE:POTABLE TREATMENT PACKAGE		PURPOSE	ZL	ZL				
		CHECKED	HXZ	HXZ				
PLANT		APPROVED	FGH	FGH				

	DESCRIPTION		UNITS	DATA	Iss
	GENERAL				
1	MANUFACTURER			ITT Lowara Co.Ltd.	
2	MODEL / SIZE			4HMS5T	
4	LOCATION			IN 40" CONTAINER	
5	PARALLEL OPERATION (YES/NO)			NO	
	OPERATING CONDITIONS				
1	REQUIRED NUMBER			2 (1+1)	
2	OPERATION MODE			1CONTINUOUS OPERATION / 1 STANDBY WAREHOUSE	
3	HAZARDOUS AREA CLASSIFICATION			NON-HAZARDOUS	
4	FLUID PUMPED			WELL WATER	
5	FLUID CHARACTERISTICS			pH =8.5	
6	AMBIENT TEMPERATURE	Min	°C	5	
7		Norm	°C	40	
8		Max	°C	47	
9	VAPOUR PRESSURE @ Pumping Temperature		Bar g	0.0234 @20°C	
10	SPECIFIC GRAVITY @ Pumping Temperature			0.998 @20°C	
11	SPECIFIC HEAT		kJ/kg°C	4.18	
12	CHLORIDE CONTENT		ppm	11	
13	SOLIDS CONTENT / SIZE				
14	FLOW RATE	Norm	m^3/h	5	
15	HEAD	Norm	m	22	
	PERFORMANCE				
1	CAPACITY	Rated	m^3/h	5.02	
2	HEAD	Rated	m	22.1	
3	PUMP SPEED	Normal	rev / min	2900	
4	NPSHR		m	1.66	
5	IMPELLER DIAMETER	RATED	mm	96	
6	NUMBER OF STAGES			4	
7	EFFICIENCY	Rated	%	56	
8	MAXIMUM FLOW		m^3/h	7.2	
9	MINIMUM HEAD		m	12.5	
10	MAXIMUM HEAD		m	37.2	
	PERFORMANCE (cont.)				
1	ABSORBED POWER RATED IMPELLER				
2	Rated Flow and Rated Head		KW	0.541	
	CONNECTIONS				

		TYPE	RATING	SIZE	POSITION
1					
2	SUCTION	Rp		DN32	END
3	DISCHARGE	Rp		DN25	TOP

	MATERIALS OF CONSTRUCTION		
1	CASING		ANSI 316L
2	IMPELLER		ANSI 316L
3	SEAL HOUSING DISK		ANSI 316L
4	DIFFUSERS		ANSI 316L
5	FIRST STAGE CASE		ANSI 316L
6	SHAFT SEAL		
7	ROTATING ASSAMBLY		V-CERAMIC ALUMINA
8	FIXED ASSAMBLY		B-CARBON
9	ELASTOMERS		E-EPDM
10	SPRINGS		G-ANSI 316
11	OTHER COMPONENTS		G-ANSI 316
	MECHANICAL DATA		
1	PUMP TYPE		HORIZONTAL MULTISTAGE CENTRIFUGAL PUMP
2	IMPELLER Type		CLOSE
3	ROTATION (Facing Motor End)		CLOCKWISE
4	LUBRICANT		GREASE
5	BASEPLATE TYPE		FOOT-MOUNTED
6	MECHANICAL SEAL MODEL		002231475

PACT	Electric Motor Data Sheets				Doc. Ref: PACT-2010-NE009-A4102-RevD		
					TAG NO.	9310-PU-1110-M	
					NAME	Water Treatment Feed Pump	
	ISSUE	A	B	C	D	E	F
PROJECT NUMBER:9806J-UNIT 9310	DATE	13-Jul-11	30-Dec-11				
SERVICE:POTABLE TREATMENT PACKAGE	PURPOSE	ZL	ZL				
	CHECKED	HXZ	HXZ				
PLANT	APPROVED	FGH	FGH				

	DESCRIPTION	UNITS	DATA	Iss
	DRIVE ARRANGEMENT			
1	DRIVER TYPE		THREE PHASE ASYNCHRONOUS INDUCTION MOTOR	
2	MANUFACTURER		Lowara	
3	POWER SUPPLY		3PHASE-400VAC/50HZ	
4	RATED POWER / SPEED	kw / rpm	0.55/2900	
5	RATED CURRENT	A	1.67	
6	INGRESS PROTECTION CLASS		IP 55	
7	INSULATION CLASS / TEMPERATURE RISE		F/B	
8	MOTOR DUTY TYPE		S1 (Continuous Running Duty)	
9	MOTOR COOLING METHOD		IC 411	
10	GLAND SIZE / NUMBER		M20*1.5	
11	CABLE ENTRY DIRECTION		TOP	
	SCOPE OF SUPPLY			
1	PUMP			
2	DRIVER			
3	BASEPLATE			
4	ONE MECHNICAL SEAL			
	WEIGHTS & DIMENSIONS			
1	TOTAL WEIGHT	kg	8.7	
2	BASEPLATE FOOTPRINT LENGTH x WIDTH	mm	153X86mm	

PACT	Electric Motor Data Sheets				Doc. Ref: PACT-2010-NE009-A4102-RevD			
					TAG NO.	9310-PU-1120-M		
					NAME	Filling Truck Network Feed Pump		
		ISSUE	A	B	C	D	E	F
PROJECT NUMBER:9806J-UNIT 9310		DATE	13-Jul-11	30-Dec-11				
SERVICE:POTABLE TREATMENT PACKAGE		PURPOSE	ZL	ZL				
		CHECKED	HXZ	HXZ				
PLANT		APPROVED	FGH	FGH				

	DESCRIPTION		UNITS	DATA	Iss
	GENERAL				
1	MANUFACTURER			ITT Lowara Co.Ltd.	
2	MODEL / SIZE			SHE40-160/40	
3	LOCATION			IN 40" CONTAINER	
4	PARALLEL OPERATION (YES/NO)			NO	
	OPERATING CONDITIONS				
1	REQUIRED NUMBER			2 (1+1)	
2	OPERATION MODE			1CONTINUOUS OPERATION / 1 STANDBY WAREHOUSE	
3	HAZARDOUS AREA CLASSIFICATION			NON-HAZARDOUS	
4	FLUID PUMPED			WELL WATER	
5	FLUID CHARACTERISTICS			pH =8.5	
6	OPERATING TEMPERATURE	Min	°C	5	
7		Norm	°C	40	
8		Max	°C	47	
9	VAPOUR PRESSURE @ Pumping Temperature		Bar g	0.0234 @20°C	
10	SPECIFIC GRAVITY @ Pumping Temperature			0.998 @20°C	
11	SPECIFIC HEAT		kJ/kg°C	4.18	
12	CHLORIDE CONTENT		ppm	11	
13	SOLIDS CONTENT / SIZE				
14	FLOW RATE	Norm	m^3/h	33	
15	HEAD	Norm	m	25	
	PERFORMANCE				
1	CAPACITY	Rated	m^3/h	34.6	
2	HEAD	Rated	m	27.5	
3	PUMP SPEED	Normal	rev / min	2900	
4	IMPELLER DIAMETER	Rated	mm	171	
5	NUMBER OF STAGES			1	
6	NPSHR		m	2.26	
7	EFFICIENCY	Rated	%	70	
8	MINIMUM FLOW		m^3/h		
9	MAXIMUM FLOW		m^3/h	48	
10	MINIMUM HEAD		m	18.6	
11	MAXIMUM HEAD		m	37.9	
	PERFORMANCE (cont.)				
1	ABSORBED POWER RATED IMPELLER				
2	Rated Flow and Rated Head		KW	3.74	
	CONNECTIONS				

		TYPE	RATING	SIZE	POSITION
1					
2	SUCTION	FLANGE RF	PN16	DN65	END
3	DISCHARGE	FLANGE RF	PN16	DN40	TOP
4	CASING VENT	THREAD G		DN10	TOP
5	CASING DRAIN	THREAD G		DN10	BOTTOM

	MATERIALS OF CONSTRUCTION	
1	CASING	ANSI 316L
2	IMPELLER	ANSI 316L
3	SEAL HOUSING	ANSI 316L
4	WEAR RING	ANSI 316L
5	COUNTERWEAR RING	ANSI 316L
6	SHAFT EXTENSION	ANSI 316
7	RIGID SHAFT COUPLING	ANSI 316
7	IMPELLER LOCKNUT AND WASHER	ANSI 316
8	TAB	ANSI 316L
9	FILL AND DRAIN PLUGS	ANSI 316
10	ELASMOTERS	FPM
11	MOTOR BRACKET	ALUMINIUM
12	PUMP BODY FASTENING BOLT &SCREW	GALVANIZED STEEL
13	SHAFT SEAL	
14	ROTATING ASSAMBLY	V-CERAMIC ALUMINA
15	FIXED ASSAMBLY	B-CARBON
16	ELASTOMERS	E-FPM
17	SPRINGS	G-ANSI 316
18	OTHER COMPONENTS	G-ANSI 316

PACT	Electric Motor Data Sheets				Doc. Ref: PACT-2010-NE009-A4102-RevD		
					TAG NO.	9310-PU-1120-M	
					NAME	Filling Truck Network Feed Pump	
		ISSUE	A	B	C	D	E	F
PROJECT NUMBER:9806J-UNIT 9310		DATE	13-Jul-11	30-Dec-11				
SERVICE:POTABLE TREATMENT PACKAGE		PURPOSE	ZL	ZL				
		CHECKED	HXZ	HXZ				
PLANT		APPROVED	FGH	FGH				

	DESCRIPTION	UNITS	DATA	Iss
	MECHANICAL DATA			
1	PUMP TYPE		HORIZONTAL CENTRIFUGAL PUMP	
2	IMPELLER Type		CLOSE	
3	ROTATION (Facing Motor End)		CLOCKWISE	
4	LUBRICANT		GREASE	
5	BASEPLATE TYPE		FOOT-MOUNTED	
6	MECHANICAL SEAL MODEL		002232201	
	DRIVE ARRANGEMENT			
1	DRIVER TYPE		THREE PHASE ASYNCHRONOUS INDUCTION MOTOR	
2	MANUFACTURER		Lowara	
3	POWER SUPPLY		3PHASE-400VAC/50HZ	
4	RATED POWER / SPEED	kw / rpm	4/2900	
5	RATED CURRENT	A	7.63	
6	INGRESS PROTECTION CLASS		IP 55	
7	INSULATION CLASS / TEMPERATURE RISE		F/B	
8	MOTOR DUTY TYPE		S1 (Continuous Running Duty)	
9	MOTOR COOLING METHOD		IC 411	
10	COLOR		RAL5010	
11	GLAND SIZE / NUMBER		M20*1.5	
12	CABLE ENTRY DIRECTION		TOP	
	SCOPE OF SUPPLY			
1	PUMP			
2	DRIVER			
3	BASEPLATE			
4	ONE MECHNICAL SEAL			
	WEIGHTS & DIMENSIONS			
1	TOTAL WEIGHT	kg	40	

PACT	Electric Motor Data Sheets				Doc. Ref: PACT-2010-NE009-A4102-RevD		
					TAG NO.	9310-PU-1210-M	
					NAME	Backwash Pump	
		ISSUE	A	B	C	D	E	F
PROJECT NUMBER:9806J-UNIT 9310		DATE	13-Jul-11	30-Dec-11				
SERVICE:POTABLE TREATMENT PACKAGE		PURPOSE	ZL	ZL				
		CHECKED	HXZ	HXZ				
PLANT		APPROVED	FGH	FGH				

	DESCRIPTION		UNITS	DATA	Iss
	GENERAL				
1	MANUFACTURER			ITT Lowara Co.Ltd.	
2	MODEL / SIZE			SHE40-160/30	
3	LOCATION			IN 40" CONTAINER	
4	PARALLEL OPERATION (YES/NO)			NO	
	OPERATING CONDITIONS				
1	REQUIRED NUMBER			2 (1+1)	
2	OPERATION MODE			1CONTINUOUS OPERATION / 1 STANDBY WAREHOUSE	
3	HAZARDOUS AREA CLASSIFICATION			NON-HAZARDOUS	
4	FLUID PUMPED			POTABLE WATER	
5	FLUID CHARACTERISTICS			pH =6.5-8.5	
6	OPERATING TEMPERATURE	Min	°C	5	
7		Norm	°C	40	
8		Max	°C	47	
9	VAPOUR PRESSURE @ Pumping Temperature		Bar g	0.0234 @20°C	
10	SPECIFIC GRAVITY @ Pumping Temperature			0.998 @20°C	
11	SPECIFIC HEAT		kJ/kg°C	4.18	
12	CHLORIDE CONTENT		ppm	11	
13	SOLIDS CONTENT / SIZE				
14	FLOW RATE	Norm	m^3/h	28	
15	HEAD	Norm	m	20	
	PERFORMANCE				
1	CAPACITY	Rated	m^3/h	30.5	
2	HEAD	Rated	m	23.8	
3	PUMP SPEED	Normal	rev / min	2900	
4	IMPELLER DIAMETER	Rated	mm	159	
5	NUMBER OF STAGES			1	
6	NPSHR		m	1.9	
7	EFFICIENCY	Rated	%	68	
8	MINIMUM FLOW		m^3/h		
9	MAXIMUM FLOW		m^3/h	45	
10	MINIMUM HEAD		m	15.1	
11	MAXIMUM HEAD		m	32.1	
	PERFORMANCE (cont.)				
1	ABSORBED POWER RATED IMPELLER				
2	Rated Flow and Rated Head		KW	2.9	
	CONNECTIONS				

		TYPE	RATING	SIZE	POSITION
1					
2	SUCTION	FLANGE RF	PN16	DN65	END
3	DISCHARGE	FLANGE RF	PN16	DN40	TOP
4	CASING VENT	THREAD G		DN10	TOP
5	CASING DRAIN	THREAD G		DN10	BOTTOM

	MATERIALS OF CONSTRUCTION	
1	CASING	ANSI 316L
2	IMPELLER	ANSI 316L
3	SEAL HOUSING	ANSI 316L
4	WEAR RING	ANSI 316L
5	COUNTERWEAR RING	ANSI 316L
6	SHAFT EXTENSION	ANSI 316
7	RIGID SHAFT COUPLING	ANSI 316
8	IMPELLER LOCKNUT AND WASHER	ANSI 316
9	TAB	ANSI 316L
10	FILL AND DRAIN PLUGS	ANSI 316
11	ELASMOTERS	FPM
12	MOTOR BRACKET	ALUMINIUM
	MATERIALS OF CONSTRUCTION	
13	PUMP BODY FASTENING BOLT &SCREW	GALVANIZED STEEL
14	SHAFT SEAL	
15	ROTATING ASSAMBLY	V-CERAMIC ALUMINA
16	FIXED ASSAMBLY	B-CARBON
17	ELASTOMERS	V-FPM
18	SPRINGS	G-ANSI 316
19	OTHER COMPONENTS	G-ANSI 316

PACT	Electric Motor Data Sheets				Doc. Ref: PACT-2010-NE009-A4102-RevD		
					TAG NO.	9310-PU-1210-M	
					NAME	Backwash Pump	
	ISSUE	A	B	C	D	E	F
PROJECT NUMBER:9806J-UNIT 9310	DATE	13-Jul-11	30-Dec-11				
SERVICE:POTABLE TREATMENT PACKAGE	PURPOSE	ZL	ZL				
	CHECKED	HXZ	HXZ				
PLANT	APPROVED	FGH	FGH				

	DESCRIPTION	UNITS	DATA	Iss
	MECHANICAL DATA			
1	PUMP TYPE		HORIZONTAL CENTRIFUGAL PUMP	
2	IMPELLER Type		CLOSE	
3	ROTATION (Facing Motor End)		CLOCKWISE	
4	LUBRICANT		GREASE	
5	BASEPLATE TYPE		FOOT-MOUNTED	
6	MECHANICAL SEAL MODEL		002232201	
	DRIVE ARRANGEMENT			
1	DRIVER TYPE		THREE PHASE ASYNCHRONOUS INDUCTION MOTOR	
2	MANUFACTURER		Lowara	
2	POWER SUPPLY		3PHASE-400VAC/50HZ	
3	RATED POWER / SPEED	kw / rpm	3/2900	
3	RATED CURRENT	A	6.19	
4	INGRESS PROTECTION CLASS		IP 55	
5	INSULATION CLASS / TEMPERATURE RISE		F/B	
6	MOTOR DUTY TYPE		S1 (Continuous Running Duty)	
7	MOTOR COOLING METHOD		IC 411	
8	COLOR		RAL5010	
8	GLAND SIZE / NUMBER		M20*1.5	
9	CABLE ENTRY DIRECTION		TOP	
	SCOPE OF SUPPLY			
1	PUMP			
2	DRIVER			
3	BASEPLATE			
4	ONE MECHNICAL SEAL			
	WEIGHTS & DIMENSIONS			
1	TOTAL WEIGHT	kg	32	

	Electric Motor Data Sheets	Doc. Ref: PACT-2010-NE009-A4102-RevD	
		TAG NO.	9310-BL-1220-M
		NAME	Air Scour Blower

	ISSUE	A	B	C	D	E	F
PROJECT NUMBER:9806J-UNIT 9310	DATE	13-Jul-11	30-Dec-11				
SERVICE:POTABLE TREATMENT PACKAGE	PURPOSE	ZL	ZL				
	CHECKED	HXZ	HXZ				
PLANT	APPROVED	FGH	FGH				

	DESCRIPTION		UNITS	DATA				Iss
	GENERAL							
1	MANUFACTURER			SJERP&JONGENEEL				
2	MODEL / SIZE			DBS575				
3	LOCATION			IN 40" CONTAINER				
	OPERATING CONDITIONS							
1	REQUIRED NUMBER			2 (1+1)				
2	OPERATION MODE			1 CONTINUOUS / 1 STANDBY WAREHOUSE				
3	FLUID PUMPED			Air				
4	SEA LEVEL		m	425				
5	AMBIENT TEMPERATURE	Min	°C	5				
6		Norm	°C	40				
7		Max	°C	47				
8	AIR DENSITY		kg/m^3	0.79				
9	ATMOSPHERIC PRESSURE		mbar	1013				
10	AMBIENT TEMPERATURE			5 ~47				
11	CAPACITY	Norm	Nm³/h	60				
12	DISCHARGE PRESSURE	Norm	kPa	44.1				
	BLOWER PERFORMANCE							
1	CAPACITY	Rated	Nm³/h	85				
2	DISCHARGE PRESSURE	Rated	kPa	44.1				
3	BLOWER SPEED	Rated	rev / min	2900				
4	EFFICIENCY	Rated	%	75				
5	DISCHARGE AIR TEMPERATURE		°C	122				
	CONNECTIONS							
1				TYPE	RATING	SIZE	POSITION	
2	SUCTION			F THREAD		2"BSP		
3	DISCHARGE			F THREAD		2"BSP		
	MATERIALS OF CONSTRUCTION							
1	CASING			DIE-CAST ALUMINIUM				
2	IMPELLER			ALUMINIUM				
3	DRIVE SHAFT			CARBON STEEL				
4	BASE PLATE			CARBON STEEL				
	MECHANICAL DATA							
1	BLOWER TYPE			SIDE CHANNEL BLOWER				
2	POWER TRANSMISSION			DIRECT COUPLING				
4	ROTATION DIRECTION (Facing Motor End)			COUNTER CLOCKWISE				
5	NOISE LEVEL		dB(A)	75				
	DRIVE ARRANGEMENT							
1	DRIVER TYPE			THREE PHASE ASYNCHRONOUS INDUCTION MOTOR				
2	MOTOR STANDARD			IEC				
3	MANUFACTURER			DUTAIR				
3	POWER SUPPLY			3PHASE-400VAC/50HZ				
4	RATED POWER / SPEED		kw / rpm	7.5/2900				
5	RATED CURRENT		A	14				
6	INGRESS PROTECTION CLASS			IP55				
7	INSULATION CLASS / TEMPERATURE RISE			F/B				
8	MOTOR DUTY TYPE			S1 (Continuous Running Duty)				
9	MOTOR COOLING METHOD			IC 411				
10	GLAND SIZE / NUMBER			M20*1.5				
11	CABLE ENTRY DIRECTION (Facing Motor End)			TOP				
	SCOPE OF SUPPLY							
1	BLOWER							
2	DRIVER							
3	BASEPLATE							
4	INLET FILTER AND SILENCER							
5	FIRST FILL OF LUBRICANT							
	WEIGHTS & DIMENSIONS							
1	TOTAL WEIGHT		kg	80				
2	BASEPLATE FOOTPRINT LENGTH x WIDTH		mm	290X140mm				

PACT	Electric Motor Data Sheets					Doc. Ref: PACT-2010-NE009-A4102-RevD		
						TAG NO.	9310-PU-1310-M	
						NAME	Chiller Feed Pump	
		ISSUE	A	B	C	D	E	F
PROJECT NUMBER:9806J-UNIT 9310		DATE	13-Jul-11	30-Dec-11				
SERVICE:POTABLE TREATMENT PACKAGE		PURPOSE	ZL	ZL				
		CHECKED	HXZ	HXZ				
PLANT		APPROVED	FGH	FGH				

	DESCRIPTION		UNITS	DATA	Iss
	GENERAL				
1	MANUFACTURER			ITT Lowara Co.Ltd.	
2	MODEL / SIZE			4HMS4T	
3	LOCATION			IN 40" CONTAINER	
4	PARALLEL OPERATION (YES/NO)			NO	
	OPERATING CONDITIONS				
1	REQUIRED NUMBER			2 (1+1)	
2	OPERATION MODE			1CONTINUOUS OPERATION / 1 STANDBY WAREHOUSE	
3	HAZARDOUS AREA CLASSIFICATION			NON-HAZARDOUS	
4	FLUID PUMPED			POTABLE WATER	
5	FLUID CHARACTERISTICS			pH =6.5-8.5	
6	AMBIENT TEMPERATURE	Min	°C	5	
7		Norm	°C	40	
8		Max	°C	47	
9	VAPOUR PRESSURE @ Pumping Temperature		Bar g	0.0234 @20°C	
10	SPECIFIC GRAVITY @ Pumping Temperature			0.998 @20°C	
11	SPECIFIC HEAT		kJ/kg°C	4.18	
12	CHLORIDE CONTENT		ppm	11	
13	SOLIDS CONTENT / SIZE				
14	FLOW RATE	Norm	m^3/h	6	
15	HEAD	Norm	m	12	
	PERFORMANCE				
1	CAPACITY	Rated	m^3/h	6.21	
2	HEAD	Rated	m	12.8	
3	PUMP SPEED	Normal	rev / min	2720	
4	IMPELLER DIAMETER	RATED	mm	96	
5	NUMBER OF STAGES			3	
6	NPSHR		m	1.9	
7	EFFICIENCY	Rated	%	51	
8	MAXIMUM FLOW		m^3/h	7.5	
9	MINIMUM HEAD		m	9	
10	MAXIMUM HEAD		m	26	
	PERFORMANCE (cont.)				
1	ABSORBED POWER RATED IMPELLER				
2	Rated Flow and Rated Head		KW	0.426	
	CONNECTIONS				

		TYPE	RATING	SIZE	POSITION
1					
2	SUCTION	Rp		DN32	END
3	DISCHARGE	Rp		DN25	TOP

	MATERIALS OF CONSTRUCTION	
1	CASING	ANSI 316L
2	IMPELLER	ANSI 316L
3	SEAL HOUSING DISK	ANSI 316L
4	DIFFUSERS	ANSI 316L
5	FIRST STAGE CASE	ANSI 316L
6	SHAFT SEAL	
7	ROTATINGASSAMBLY	V-CERAMIC ALUMINA
8	FIXED ASSAMBLY	B-CARBON
9	ELASTOMERS	E-EPDM
10	SPRINGS	G-ANSI 316
11	OTHER COMPONENTS	G-ANSI 316
	MECHANICAL DATA	
1	PUMP TYPE	HORIZONTAL MULTISTAGE CENTRIFUGAL PUMP
2	IMPELLER Type	CLOSE
3	ROTATION (Facing Motor End)	CLOCKWISE
4	LUBRICANT	GREASE
5	BASEPLATE TYPE	FOOT-MOUNTED
6	MECHANICAL SEAL MODEL	002231475

PACT	Electric Motor Data Sheets				Doc. Ref: PACT-2010-NE009-A4102-RevD		
					TAG NO.	9310-PU-1310-M	
					NAME	Chiller Feed Pump	
	ISSUE	A	B	C	D	E	F
PROJECT NUMBER:9806J-UNIT 9310	DATE	13-Jul-11	30-Dec-11				
SERVICE:POTABLE TREATMENT PACKAGE	PURPOSE	ZL	ZL				
	CHECKED	HXZ	HXZ				
PLANT	APPROVED	FGH	FGH				

	DESCRIPTION	UNITS	DATA	Iss
	DRIVE ARRANGEMENT			
1	DRIVER TYPE		THREE PHASE ASYNCHRONOUS INDUCTION MOTOR	
2	MANUFACTURER		Lowara	
3	POWER SUPPLY		3PHASE-400VAC/50HZ	
4	RATED POWER / SPEED	kw / rpm	0.45/2720	
5	RATED CURRENT	A	1.49	
6	INGRESS PROTECTION CLASS		IP 55	
7	INSULATION CLASS / TEMPERATURE RISE		F/B	
8	MOTOR DUTY TYPE		S1 (Continuous Running Duty)	
9	MOTOR COOLING METHOD		IC 411	
10	COLOR		RAL5010	
11	GLAND SIZE / NUMBER		M20*1.5	
12	CABLE ENTRY DIRECTION		TOP	
	WEIGHTS & DIMENSIONS			
1	TOTAL WEIGHT	Kg	7.8	
2	BASEPLATE FOOTPRINT LENGTH x WIDTH	mm	153X86mm	

PACT	Electric Motor Data Sheets				Doc. Ref: PACT-2010-NE009-A4102-RevD			
					TAG NO.	9310-PU-1400A/B-M		
					NAME	Potable Water Feed Pump		
		ISSUE	A	B	C	D	E	F
PROJECT NUMBER:9806J-UNIT 9310		DATE	13-Jul-11	30-Dec-11				
SERVICE:POTABLE TREATMENT PACKAGE		PURPOSE	ZL	ZL				
		CHECKED	HXZ	HXZ				
PLANT		APPROVED	FGH	FGH				

	DESCRIPTION		UNITS	DATA				Iss
	GENERAL							
1	MANUFACTURER			ITT Lowara Co.Ltd.				
2	MODEL / SIZE			SHS40-200/55				
3	LOCATION			IN 40" CONTAINER				
4	PARALLEL OPERATION (YES/NO)			NO				
	OPERATING CONDITIONS							
1	REQUIRED NUMBER			2				
2	OPERATION MODE			1CONTINUOUS OPERATION / 1 STANDBY INSTALLED				
3	HAZARDOUS AREA CLASSIFICATION			NON-HAZARDOUS				
4	FLUID PUMPED			POTABLE WATER				
5	FLUID CHARACTERISTICS			pH =6.5-8.5				
6	AMBIENT TEMPERATURE	Min	°C	5				
		Norm	°C	40				
		Max	°C	47				
7	VAPOUR PRESSURE @ Pumping Temperature		Bar g	0.0234 @20°C				
8	SPECIFIC HEAT		kJ/kg°C	4.18				
9	VISCOSITY @ Pumping Temperature		cP @ °C	0.986 @ 5°C				
10	CHLORIDE CONTENT		ppm	11				
11	SOLIDS CONTENT / SIZE							
12	FLOW RATE	Norm	m^3/h	20				
13	HEAD	Norm	m	43				
	PERFORMANCE							
1	CAPACITY	Rated	m^3/h	20.5				
2	HEAD	Rated	m	45.4				
3	PUMP SPEED	Normal	rev / min	2900				
4	IMPELLER DIAMETER	Rated	mm	190				
5	NUMBER OF STAGES			1				
6	NPSHR		m	1.7				
7	EFFICIENCY	Rated	%	60				
8	MAXIMUM FLOW		m^3/h	48				
9	MINIMUM HEAD		m	25				
10	MAXIMUM HEAD		m	49.1				
	PERFORMANCE (cont.)							
1	ABSORBED POWER RATED IMPELLER							
2	Rated Flow and Rated Head		KW	4.3				
	CONNECTIONS							
1				TYPE	RATING	SIZE	POSITION	
2	SUCTION			FLANGE RF	PN16	DN65	END	
3	DISCHARGE			FLANGE RF	PN16	DN40	TOP	
4	CASING VENT			THREAD G		DN10"	TOP	
5	CASING DRAIN			THREAD G		DN10"	BOTTOM	
	MATERIALS OF CONSTRUCTION							
1	CASING			ANSI 316L				
2	IMPELLER			ANSI 316L				
3	SEAL HOUSING			ANSI 316L				
4	WEAR RING			ANSI 316L				
5	COUNTERWEAR RING			ANSI 316L				
6	RIGID SHAFT COUPLING			ANSI 316				
7	IMPELLER LOCKNUT AND WASHER			ANSI 316				
8	TAB			ANSI 316L				
9	FILL AND DRAIN PLUGS			ANSI 316L				
10	ELASMOTERS			FPM				
11	MOTOR BRACKET			ALUMINIUM				
12	ADAPTER MOTOR COUPLING			CAST IRON ASTM CLASS 25				
	MATERIALS OF CONSTRUCTION							
13	PUMP BODY FASTENING BOLT &SCREW			GALVANIZED STEEL				
14	SHAFT SEAL							
15	ROTATINGASSAMBLY			V-CERAMIC ALUMINA				
16	FIXED ASSAMBLY			B-CARBON				
17	ELASTOMERS			V-FPM				
18	SPRINGS			G-ANSI 316				
19	OTHER COMPONENTS			G-ANSI 316				

PACT	Electric Motor Data Sheets				Doc. Ref: PACT-2010-NE009-A4102-RevD		
					TAG NO.	9310-PU-1400A/B-M	
					NAME	Potable Water Feed Pump	

	ISSUE	A	B	C	D	E	F
PROJECT NUMBER:9806J-UNIT 9310	DATE	13-Jul-11	30-Dec-11				
SERVICE:POTABLE TREATMENT PACKAGE	PURPOSE	ZL	ZL				
	CHECKED	HXZ	HXZ				
PLANT	APPROVED	FGH	FGH				

	DESCRIPTION	UNITS	DATA	Iss
	MECHANICAL DATA			
1	PUMP TYPE		HORIZONTAL CENTRIFUGAL PUMP	
2	IMPELLER Type		CLOSE	
3	ROTATION (Facing Motor End)		CLOCKWISE	
4	LUBRICANT		GREASE	
5	BASEPLATE TYPE		FOOT-MOUNTED	
6	MECHANICAL SEAL MODEL		002232201	
	DRIVE ARRANGEMENT			
1	DRIVER TYPE		THREE PHASE FREQUENCY CONTROL MOTOR	
2	MANUFACTURER		TECO	
3	POWER SUPPLY		3PHASE-400VAC/50HZ	
4	RATED POWER / SPEED	kw / rpm	5.5/2900	
5	RATED CURRENT	A	10.4	
6	INGRESS PROTECTION CLASS		IP 55	
7	INSULATION CLASS / TEMPERATURE RISE		F/B	
8	MOTOR DUTY TYPE		S1 (Continuous Running Duty)	
9	MOTOR COOLING METHOD		IC 416	
10	COLOR		RAL5010	
11	GLAND SIZE / NUMBER		M20*1.5	
12	CABLE ENTRY DIRECTION		TOP	
	SCOPE OF SUPPLY			
1	PUMP			
2	DRIVER			
3	BASEPLATE			
4	ONE MECHNICAL SEAL			
	WEIGHTS & DIMENSIONS			
1	TOTAL WEIGHT	kg	63	

PACT	Electric Motor Data Sheets				Doc. Ref: PACT-2010-NE009-A4102-RevD			
					TAG NO.	9310-PU-1240-M		
					NAME	Backwash Reject Water Pump		
		ISSUE	A	B	C	D	E	F
PROJECT NUMBER:9806J-UNIT 9310		DATE	13-Jul-11	30-Dec-11				
SERVICE:POTABLE TREATMENT PACKAGE		PURPOSE	ZL	ZL				
		CHECKED	HXZ	HXZ				
PLANT		APPROVED	FGH	FGH				

	DESCRIPTION		UNITS	DATA				Iss
	GENERAL							
1	MANUFACTURER			ITT Lowara Co.Ltd.				
2	MODEL / SIZE			CA120/33				
3	LOCATION			OUTDOOR(UNDER SHELTER)				
4	PARALLEL OPERATION (YES/NO)			NO				
	OPERATING CONDITIONS							
1	REQUIRED NUMBER			2 (1+1)				
2	OPERATION MODE			1CONTINUOUS OPERATION / 1 STANDBY WAREHOUSE				
3	HAZARDOUS AREA CLASSIFICATION			NON-HAZARDOUS				
4	FLUID PUMPED			BACKWASH WATER				
5	FLUID CHARACTERISTICS			pH =6.5-8.5				
6	OPERATING TEMPERATURE	Min	°C	5				
7		Norm	°C	40				
8		Max	°C	47				
9	VAPOUR PRESSURE @ Pumping Temperature		Bar g	0.0234 @20°C				
10	SPECIFIC GRAVITY @ Pumping Temperature			0.998 @20°C				
11	SPECIFIC HEAT		kJ/kg°C	4.18				
12	CHLORIDE CONTENT		ppm	11				
13	SOLIDS CONTENT / SIZE							
14	FLOW RATE	Norm	m^3/h	5				
15	HEAD	Norm	m	30				
	PERFORMANCE							
1	CAPACITY	Rated	m^3/h	5.29				
2	HEAD	Rated	m	33.6				
3	PUMP SPEED	Normal	rev / min	2900				
4	NUMBER OF STAGES			2				
5	NPSHR		m	5.91				
6	EFFICIENCY	Rated	%	45				
7	MAXIMUM FLOW		m^3/h	9				
8	MINIMUM HEAD		m	21				
9	MAXIMUM HEAD		m	44.4				
	PERFORMANCE (cont.)							
1	ABSORBED POWER RATED IMPELLER							
2	Rated Flow and Rated Head		KW	1.06				
	CONNECTIONS							
1				TYPE	RATING	SIZE	POSITION	
2	SUCTION			Rp		DN32	END	
3	DISCHARGE			Rp		DN25	TOP	
	MATERIALS OF CONSTRUCTION							
1	CASING			ANSI 304				
2	IMPELLER			ANSI 304				
3	SUCTION FLANGE			ANSI 304				
4	DIFFUSER COVER			ANSI 304				
5	SHAFT SEAL							
6	ROTATING ASSAMBLY			V-CERAMIC ALUMINA				
7	FIXED ASSAMBLY			B-CARBON				
8	ELASTOMERS			P-NBR				
9	SPRINGS			G-ANSI 316				
10	OTHER COMPONENTS			G-ANSI 304				
	MECHANICAL DATA							
1	PUMP TYPE			HORIZONTAL MULTISTAGE CENTRIFUGAL PUMP				
2	IMPELLER	Type		CLOSE				
3	ROTATION (Facing Motor End)			CLOCKWISE				
4	LUBRICANT			GREASE				
5	BASEPLATE	TYPE		FOOT-MOUNTED				
6	MECHANICAL SEAL MODEL			002228861				

PACT	Electric Motor Data Sheets				Doc. Ref: PACT-2010-NE009-A4102-RevD		
					TAG NO.	9310-PU-1240-M	
					NAME	Backwash Reject Water Pump	
	ISSUE	A	B	C	D	E	F
PROJECT NUMBER:9806J-UNIT 9310	DATE	13-Jul-11	30-Dec-11				
SERVICE:POTABLE TREATMENT PACKAGE	PURPOSE	ZL	ZL				
	CHECKED	HXZ	HXZ				
PLANT	APPROVED	FGH	FGH				

	DESCRIPTION	UNITS	DATA	Iss
	DRIVE ARRANGEMENT			
1	DRIVER TYPE		THREE PHASE ASYNCHRONOUS INDUCTION MOTOR	
2	MANUFACTURER		Lowara	
3	POWER SUPPLY		3PHASE-400VAC/50HZ	
4	RATED POWER / SPEED	kw / rpm	1.1/2900	
5	RATED CURRENT	A	2.92	
6	INGRESS PROTECTION CLASS		IP55(outdoor motor）	
7	INSULATION CLASS / TEMPERATURE RISE		F/B	
8	MOTOR DUTY TYPE		S1 (Continuous Running Duty)	
9	MOTOR COOLING METHOD		IC 411	
10	GLAND SIZE / NUMBER		M20*1.5	
11	CABLE ENTRY DIRECTION		TOP	
	SCOPE OF SUPPLY			
1	PUMP			
2	DRIVER			
3	BASEPLATE			
4	ONE MECHNICAL SEAL			
	WEIGHTS & DIMENSIONS			
1	TOTAL WEIGHT	kg	16.8	
2	BASEPLATE FOOTPRINT LENGTH x WIDTH	mm	125X100mm	

	Electric Motor Data Sheets	Doc. Ref: PACT-2010-NE009-A4102-RevD
		TAG NO. 9310-PU-1163-M
		NAME Flocculant Dosing Pump

		ISSUE	A	B	C	D	E	F
PROJECT NUMBER:9806J-UNIT 9310		DATE	13-Jul-11	30-Dec-11				
SERVICE:POTABLE TREATMENT PACKAGE		PURPOSE	ZL	ZL				
		CHECKED	HXZ	HXZ				
PLANT		APPROVED	FGH	FGH				

	DESCRIPTION		UNITS	DATA	Iss
	GENERAL				
1	MANUFACTURER			Milton Roy	
2	MODEL / SIZE			P766-363SI	
4	LOCATION			IN 40" CONTAINER	
5	PARALLEL OPERATION (YES/NO)			NO	
	OPERATING CONDITIONS				
1	REQUIRED NUMBER			2 (1+1)	
2	OPERATION MODE			1CONTINUOUS OPERATION / 1 STANDBY WAREHOUSE	
3	HAZARDOUS AREA CLASSIFICATION			NON-HAZARDOUS	
4	FLUID PUMPED			FLOCCULANT SOLUTION	
5	FLUID CONCENTRATION		%	10	
6	FLUID CHARACTERISTICS			pH =3	
7	AMBIENT TEMPERATURE	Min	°C	5	
8		Norm	°C	40	
9		Max	°C	47	
10	FLOW RATE	Norm	l/hr	7.6	
11	HEAD	Norm	bar	3.5	
	PERFORMANCE				
1	CAPACITY	MAX	l/hr	7.6	
2	HEAD	MAX	bar	3.5	
	MATERIALS OF CONSTRUCTION				
1	PUMP SHELL			REINFORCE PP	
2	PUMP HEAD			PVDF	
3	DIAGHRAGM			FLUORINE COMPLEX	
4	VALVE SEAT			PVDF/PTFE	
5	O RING			VITON	
6	HOSE TUBE			PE	
7	BALL OF VALVE			CERAMICS	
	DRIVE ARRANGEMENT				
1	POWER SUPPLY			SINGLE PHASE-230VAC/50HZ	
2	RATED POWER		W	29	
3	AMBIENT TEMPERATURE		°C	-10~45	
4	MOTOR DUTY TYPE			S1 (Continuous Running Duty)	
5	PROTECTION CLASS			IP65	
	ACCESSORIES				
1	DN10 HOSE TUBE			10m	
2	DN10 INTRODUCTION VALVE			2	
3	DN10 SUCTION VALVE			2	
4	DN10 BOTTOM VALVE			2	
5	DN10 3-FV VALVE			2	
6	CONTROL MODULE MP-100			2	
	SPARE PART				
1	STANDARD SPARE PART PACKAGE RPM-363				
2	POOL			PVDF/CERAMICS	
3	SPRING			HAYNES ALLOY	
4	O RING			VITON	
5	GASKET			FLUORINE RUBBER	
6	DIAGHRAGM			FLUORINE COMPLEX	
7	SHAFT SEAL			FLUORINE RUBBER	
8	BOLT			SS316	
	SCOPE OF SUPPLY				
1	PUMP				
2	STANDARD SPARE PART PACKAGE				
3	FIRST FILL OF LUBRICANT				
4	HOLDING DOWN BOLTS (ANCHOR BOLTS AND NUTS)				
	WEIGHTS & DIMENSIONS				
1	TOTAL WEIGHT		kg	8.7	

	Electric Motor Data Sheets	Doc. Ref: PACT-2010-NE009-A4102-RevD
		TAG NO. 9310-PU-1334A/B-M
		NAME $Ca(ClO)_2$ Dosing Pump

	ISSUE	A	B	C	D	E	F
PROJECT NUMBER:9806J-UNIT 9310	DATE	13-Jul-11	30-Dec-11				
SERVICE:POTABLE TREATMENT PACKAGE	PURPOSE	ZL	ZL				
	CHECKED	HXZ	HXZ				
PLANT	APPROVED	FGH	FGH				

	DESCRIPTION		UNITS	DATA	Iss
	GENERAL				
1	MANUFACTURER			Milton Roy	
2	MODEL / SIZE			P766-363SI	
3	LOCATION			IN 40" CONTAINER	
4	PARALLEL OPERATION (YES/NO)			NO	
	OPERATING CONDITIONS				
1	REQUIRED NUMBER			3 (2+1)	
2	OPERATION MODE			2CONTINUOUS OPERATION / 1 STANDBY WAREHOUSE	
3	HAZARDOUS AREA CLASSIFICATION			NON-HAZARDOUS	
4	FLUID PUMPED			$Ca(ClO)_2$ SOLUTION	
5	FLUID CONCENTRATION		%	2	
6	FLUID CHARACTERISTICS			pH =7.0	
7	AMBIENT TEMPERATURE	Min	°C	5	
8		Norm	°C	40	
9		Max	°C	47	
10	FLOW RATE	Norm	l/hr	7.6	
11	HEAD	Norm	bar	3.5	
	PERFORMANCE				
1	CAPACITY	MAX	l/hr	7.6	
2	HEAD	MAX	bar	3.5	
	MATERIALS OF CONSTRUCTION				
1	PUMP SHELL			REINFORCE PP	
2	PUMP HEAD			PVDF	
3	DIAGHRAGM			FLUORINE COMPLEX	
4	VALVE SEAT			PVDF/PTFE	
5	O RING			VITON	
6	HOSE TUBE			PE	
7	BALL OF VALVE			CERAMICS	
	DRIVE ARRANGEMENT				
1	POWER SUPPLY			SINGLE PHASE-230VAC/50HZ	
2	RATED POWER		W	29	
3	AMBIENT TEMPERATURE		°C	-10~45	
4	MOTOR DUTY TYPE			S1 (Continuous Running Duty)	
5	PROTECTION CLASS			IP65	
	ACCESSORIES				
1	DN10 HOSE TUBE			15m	
2	DN10 INTRODUCTION VALVE			3	
3	DN10 SUCTION VALVE			3	
4	DN10 BOTTOM VALVE			3	
5	DN10 3-FV VALVE			3	
6	CONTROL MODULE MP-100			3	
	SPARE PART				
1	STANDARD SPARE PART PACKAGE RPM-363				
2	POOL			PVDF/CERAMICS	
3	SPRING			HAYNES ALLOY	
4	O RING			VITON	
5	GASKET			FLUORINE RUBBER	
6	DIAGHRAGM			FLUORINE COMPLEX	
7	SHAFT SEAL			FLUORINE RUBBER	
8	BOLT			SS316	
	SCOPE OF SUPPLY				
1	PUMP				
2	STANDARD SPARE PART PACKAGE				
3	FIRST FILL OF LUBRICANT				
4	HOLDING DOWN BOLTS (ANCHOR BOLTS AND NUTS)				
	WEIGHTS & DIMENSIONS				
1	TOTAL WEIGHT		kg	8.7	

	Electric Motor Data Sheets	Doc. Ref: PACT-2010-NE009-A4102-RevD
		TAG NO. 9310-MX-1162-M
		NAME Flocculant Mixer

	ISSUE	A	B	C	D	E	F
PROJECT NUMBER:9806J-UNIT 9310	DATE	13-Jul-11	30-Dec-11				
SERVICE:POTABLE TREATMENT PACKAGE	PURPOSE	ZL	ZL				
	CHECKED	HXZ	HXZ				
PLANT	APPROVED	FGH	FGH				

	DESCRIPTION		UNITS	DATA	Iss
	GENERAL				
1	MANUFACTURER			YANGTSE	
2	MODEL / SIZE			RXF67-A130/150-900CR1	
3	LOCATION			IN 40" CONTAINER	
4	PARALLEL OPERATION (YES/NO)			No	
	OPERATING CONDITIONS				
1	REQUIRED NUMBER			1	
2	OPERATION MODE			CONTINUOUS OPERATION	
3	HAZARDOUS AREA CLASSIFICATION			NON-HAZARDOUS	
4	FLUID PUMPED			FLOCCULANT SOLUTION	
5	FLUID CONCENTRATION		%	10	
6	FLUID CHARACTERISTICS			pH =3	
7	OPERATING TEMPERATURE	Min	°C	5	
8		Norm	°C	40	
9		Max	°C	47	
10	SPECIFIC GRAVITY @ PUMPING TEMPERATURE			1.1	
11	VISCOSITY @ PUMPING TEMPERATURE		mpa.s	50	
12	INSTALLATION METHOD			Top entry	
	TANK DATA				
1	TANK TAG NO.			9310-TK-1161	
2	TANK MATERIAL OF TANK			HDPE	
3	DIAMETER OF TANK		mm	600	
4	TANK OVERALL HEIGHT		mm	1100	
5	WATER LEVEL OF TANK	Min	mm	100	
6		Norm	mm	100<LEVEL<700	
7		Max	mm	700	
8	**BAFFLE**			**NO**	
	MENCHNICAL DATE				
1	TYPE OF AGITATOR			VERTICAL AGITAOR	
2	TYPE OF IMPELLER				
3	DIAMETER OF IMPELLER		mm	150	
4	NUMBER OF IMPELLER			1	
5	NUMBER OF BLADE			2	
6	LENGTH OF SHAFT		mm	900	
7	DIAMETER OF SHAFT		mm	60	
8	SPEED OF AGITATOR		rev / min	292	
9	LUBRICATION METHOD				
10	LUBIRCANT				
	MATERIALS OF CONSTRUCTION				
1	STIRRER			CARBON STEEL WITH RUBBER	
2	SHAFT			CARBON STEEL WITH RUBBER	
3	COUPLER			CARBON STEEL WITH RUBBER	
4	INTALLATION			CARBON STEEL WITH RUBBER	
5	REDUCTION GEARS			COMBINATION	
	DRIVE ARRANGEMENT OF DRIVING DEVICE				
1	DRIVER TYPE			27-0.25-5-V1	
2	DRIVER MANUFACTURER			ABB	
3	POWER SUPPLY			3PHASE-400VAC/50HZ	
4	RATED POWER / SPEED		kw / rpm	0.18/300	
5	INGRESS PROTECTION CLASS			IP55	
6	EFFICIENCY	Rated	%	45	
7	INSULATION CLASS / TEMPERATURE RISE			F/B	
8	MOTOR DUTY TYPE			Continuous Running Duty	
9	MOTOR COOLING METHOD			IC 411	
10	REDUCER MANUFACTURER			SEW	
11	REDUCER RATIO			100	
	WEIGHTS & DIMENSIONS				
1	TOTAL WEIGHT		KG	47	
2	TOTAL OPERATION WEIGHT		KG	50	

PACT	Electric Motor Data Sheets				Doc. Ref: PACT-2010-NE009-A4102-RevD		
					TAG NO.	9310-MX-1162-M	
					NAME	Flocculant Mixer	
	ISSUE	A	B	C	D	E	F
PROJECT NUMBER:9806J-UNIT 9310	DATE	13-Jul-11	30-Dec-11				
SERVICE:POTABLE TREATMENT PACKAGE	PURPOSE	ZL	ZL				
	CHECKED	HXZ	HXZ				
PLANT	APPROVED	FGH	FGH				

	DESCRIPTION	UNITS	DATA	Iss

PACT	Electric Motor Data Sheets				Doc. Ref: PACT-2010-NE009-A4102-RevD		
					TAG NO.	9310-MX-1332-M	
					NAME	$Ca(ClO)_2$ Solution Mixer	
		ISSUE	A	B	C	D	E	F
PROJECT NUMBER:9806J-UNIT 9310		DATE	13-Jul-11	30-Dec-11				
SERVICE:POTABLE TREATMENT PACKAGE		PURPOSE	ZL	ZL				
		CHECKED	HXZ	HXZ				
PLANT		APPROVED	FGH	FGH				

	DESCRIPTION		UNITS	DATA	Iss
	GENERAL				
1	MANUFACTURER			YANGTSE	
2	MODEL / SIZE			RXF67-A130/150-900CR1	
3	LOCATION			IN 40" CONTAINER	
4	PARALLEL OPERATION (YES/NO)			No	
	OPERATING CONDITIONS				
1	REQUIRED NUMBER			1	
2	OPERATION MODE			CONTINUOUS OPERATION	
3	HAZARDOUS AREA CLASSIFICATION			NON-HAZARDOUS	
4	FLUID PUMPED			$Ca(ClO)_2$ SOLUTION	
5	FLUID CONCENTRATION		%	1	
6	FLUID CHARACTERISTICS			pH =8-10	
7	OPERATING TEMPERATURE	Min	°C	5	
8		Norm	°C	40	
9		Max	°C	47	
10	SPECIFIC GRAVITY @ PUMPING TEMPERATURE			1	
11	VISCOSITY @ PUMPING TEMPERATURE		mpa.s	20	
12	INSTALLATION METHOD			Top entry	
	TANK DATA				
1	TANK TAG NO.			9310-TK-1331	
2	TANK MATERIAL OF TANK			HDPE	
3	DIAMETER OF TANK		mm	600	
4	TANK OVERALL HEIGHT		mm	1100	
5	WATER LEVEL OF TANK	Min	mm	100	
6		Norm	mm	100<LEVEL<700	
7		Max	mm	700	
8	**BAFFLE**			**NO**	
	MENCHNICAL DATE				
1	TYPE OF AGITATOR			VERTICAL AGITAOR	
2	TYPE OF IMPELLER				
3	DIAMETER OF IMPELLER		mm	150	
4	NUMBER OF IMPELLER			1	
5	NUMBER OF BLADE			2	
6	LENGTH OF SHAFT		mm	900	
7	DIAMETER OF SHAFT		mm	60	
8	SPEED OF AGITATOR		rev / min	292	
9	LUBRICATION METHOD				
10	LUBIRCANT				
	MATERIALS OF CONSTRUCTION				
1	STIRRER			CARBON STEEL WITH RUBBER	
2	SHAFT			CARBON STEEL WITH RUBBER	
3	COUPLER			CARBON STEEL WITH RUBBER	
4	INTALLATION			CARBON STEEL WITH RUBBER	
5	REDUCTION GEARS			CARBON STEEL WITH RUBBER	
	DRIVE ARRANGEMENT OF DRIVING DEVICE				
1	DRIVER TYPE			27-0.25-5-V1	
2	DRIVER MANUFACTURER			ABB	
3	POWER SUPPLY			3PHASE-400VAC/50HZ	
4	RATED POWER / SPEED		kw / rpm	0.18/300	
5	INGRESS PROTECTION CLASS			IP55	
6	EFFICIENCY	Rated	%	45	
7	INSULATION CLASS / TEMPERATURE RISE			F/B	
8	MOTOR DUTY TYPE			Continuous Running Duty	
9	MOTOR COOLING METHOD			IC 411	
10	REDUCER MANUFACTURER			SEW	
11	REDUCER RATIO			100	
	WEIGHTS & DIMENSIONS				
1	TOTAL WEIGHT		KG	47	
2	TOTAL OPERATION WEIGHT		KG	50	

PACT	Electric Motor Data Sheets				Doc. Ref: PACT-2010-NE009-A4102-RevD		
					TAG NO.	9310-MX-1332-M	
					NAME	$Ca(ClO)_2$ Solution Mixer	
	ISSUE	A	B	C	D	E	F
PROJECT NUMBER:9806J-UNIT 9310	DATE	13-Jul-11	30-Dec-11				
SERVICE:POTABLE TREATMENT PACKAGE	PURPOSE	ZL	ZL				
	CHECKED	HXZ	HXZ				
PLANT	APPROVED	FGH	FGH				

	DESCRIPTION	UNITS	DATA	Iss

PACT	Electric Motor Data Sheets				Doc. Ref: PACT-2010-NE009-A4102-RevD		
					TAG NO.	9310-CO-1341	
					NAME	Chiller	
	ISSUE	A	B	C	D	E	F
PROJECT NUMBER:9806J-UNIT 9310	DATE	13-Jul-11	30-Dec-11				
SERVICE:POTABLE TREATMENT PACKAGE	PURPOSE	ZL	ZL				
	CHECKED	HXZ	HXZ				
PLANT	APPROVED	FGH	FGH				

	DESCRIPTION	UNITS	DATA	Iss
	General			
1	Manufacturer		Carrier	
2	Model / Size		30RB060	
3	Location		OUTDOORS(UNDER SHELTER)	
4	Parallel Operation (YES/NO)		NO	
	Information			
1	Quantity		1	
2	Refrigerant		R410A	
3	Shipping Weight	kg	546	
4	Operation Weight	kg	545	
5	Length	mm	2109	
6	Width	mm	1090	
7	Height	mm	1321	
	Eaaporator Information			
4	Fluid Type		Fresh Water	
5	Fouling Factor	(sqm-K)/kw	0.018	
5	Leaving Temperature	°C	10.0	
6	Entering Temperature	°C	15.0	
6	Fluid Flow	L/s	2.7	
7	Pressure Drop	kPa	50.9	
	Condenser Information			
1	Altitude	m	0	
2	Number of Fans		1	
3	Total Condenser Fan Air Flow	L/s	3800	
4	Entering Air Temperature	°C	45.0	
	Integrated Pump Information			
1	Dynamic Head at Pump	kPa	257.5	
2	Dynamic Head External to Chiller	kPa	206.6	
	Electrical Information			
1	Voltage	V-Ph-Hz	3PHASE-400VAC/50HZ	
2	Cooling Capacity	KW	55.8 @ 45°C	
3	Total Compressor Power	KW	24.8	
4	Total Fan Motor Power	KW	0.67	
5	Pump Power	KW	1.31	
6	Total Unit Power (without pump)	KW	25.4	
7	Total Unit Power (with pump)	KW	26.7	
8	Standby Power	KW	1.4	
9	Minimum Voltage	Volts	360	
10	Maximum Voltage	Volts	440	
11	Power Factor		0.83	
12	INSULATION CLASS / TEMPERATURE RISE		F/B	
13	MOTOR DUTY TYPE		S1 (Continuous Running Duty)	
14	PROTECTION CLASS		IP65	
15	Efficiency (without pump)	COP	2.19	
16	A-Weighted Sound Pressure Level	dbA	64	

Amps(Un)	Electrical Circuit 1	Electrical Circuit 2
Max Unit Current Draw (RLA)	50.7	
Max Start Up Current(ICF)	145.8	
Nominal Unit Current Draw(A)	40.7	

Accessories and installed Options

Standard High Pressure Single Pump

All performance efficiency data are without pump

Certified in accordance with Water Chilling(heat pump) Packages using the Vapor Compression Cycle Certification Program,which is based on GB/T 18430.1-2007

Sound pressure level measured in accordance with JBT4330.Sound pressure level is the data when the unit is placed in a free filed over a reflecting plane.