Base Load Power Hub (BLPH)

WATER TREATMENT PACKAGE

ELECTRICAL LOAD LIST

Document Number: 1724000448-EL-LIS-00018

Document Class: 2

02	28/08/2024	Accepted for Construction (AFC)	PSC	EC	RM
01	17/07/2024	Accepted for Construction (AFC)	PSC	EC	RM
00	15/05/2024	Issue for Review (IFR)	PSC	EC	RM
Rev.	Date	Description	Prepared	Reviewed	Approved

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File: 1724000448-EL-LIS-00018_Rev.2_Electrical Load List .xlsx

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Revision / Change Log

Rev.	Description
00	Issue for Review (IFR)
01	Accepted for Construction (AFC)
02	Accepted for Construction (AFC)

HOLDS LIST

No.	Description
1.	
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CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO
Document Title:	ELECTRICAL LOAD LIST	Sh. 4 of 8 Date: 28/08/2024 Rev. 02

INSTRUCTIONS FOR USE OF THE FORM

1 Item: Identification code of motor/electrical panel/electrical user

2 Description: Function of the driven machine in the plant

3 P&I: P&I - drawing and sheet number

4 Duty type: Operation

- **C** = Continuous.
- **D** = Discontinuous.
- **I** = Intermittent.

5 Duty operat. cond: Definition of the operation conditions of the utilities

- **R** = Running
- **S1** = Stand - by (installed)
- **S2** = Spare (not installed)

6 Type of supply:

- **N** = **NORMAL**. It has stopped for the logic and/or for feeding black-out.
- **R/..s** = **REACCELERATION**. The automatic reacceleration shall be foreseen in case of loss of power within the specified time in seconds.
- **E/..s** = **EMERGENCY**. It has to be maintained in operation re-fed in case of the normal feeding inefficiency.Max time allowed during voltage absence (sec.)

7 Control: (more type of control can coexist at the same time)

- PLC = Computer Control System
- PP = Power Panel
- HC = Local Hand Control (see below type)
- EPB = Emergency push button
- LCP = Local Control Panel

8 Signals to control system and/or at Emerg. Shut Down (ESD) (more type can coexist at the same time)

- **R** = Motor status (running)
- **S** = Motor status (stopped)
- **F** = Fault
- **X** = Test mode
- **RP** = Selector on remote position
- **LP** = Selector on local position
- **P** = Absorbed power
- **A** = Absorbed current
- **SI** = Speed indication (4-20 mA)
- **CB** = Circuit breaker status
- **E** = Emergency stop
- **Y** = Ready to start
- **NY** = Not ready to start/Fault
- **VF** = VFD Fault
- **VA** = VFD Alarm
- **SS** = Set Point
- **PS** = Proximity Switch
- **RD** = Motor status (running DOWN)
- **RU** = Motor status (running UP)
- **RH** = Motor status (running HIGHT)
- **RL** = Motor status (running LOW)
- **RR** = Motor status (running RIGHT/BACKWARD)
- **RF** = Motor status (running FORWARD)

9 HW interlock HW interlock - See document ……

10 Special requirem.: (more type can coexist at the same time)

- **F1** = Aux Fan for motor with VFD starter at 230V
- **F2** = Aux Fan for motor with VFD starter at 400V
- **R1** = Anticondensate resistance at 110V
- **R2** = Anticondensate resistance at 230V
- **T1** = Thermistor PTC type
- **T2** = Thermistor PT100 type
- **S1** = Feed solenoid valve 24V
- **S2** = Feed solenoid valve 110V
- **S3** = Feed solenoid valve 230V
- **SDS** = Safety Disconnectro Switch
- **A1** = Ammeter on Power Panel PP
- **A2** = Ammeter on local hand control
- **A3** = Ammeter to CCS
- **V1** = Vibrating sensor

CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO
Document Title:	ELECTRICAL LOAD LIST	Sh. 5 of 8 Date: 28/08/2024 Rev. 02

INSTRUCTIONS FOR USE OF THE FORM

11 Power: Definition of the user power value

kWU = **ABSORBED POWER**. Operating brake power.

PN = **INSTALLED POWER**. Rated power of the motor, including safety factors.

12 Voltage: Definition of the user voltage value

13 Frequency Definition of the user frequency value

14 Current: Definition of the user current value

15 Starting Current: Definition of the user starting current value

16 Speesd: Definition of the user speed value

17 Power Factor: Definition of the user cosφ value

18 Efficiency: Definition of the user efficiency value

19 Feeder from: Definition of the electric user starter panel

20 Starter type: Definition of the electric user starter type

DOL = Direct On Line
HD = Heavy duty direct on line
SD = Star - Delta
HSD = Heavy duty Star - Delta
DRW = Direct + reverse
SS = Soft Starter
TW = Double speed 2 windings
DAHL = Double speed 1winding
VFD = Variable Frequency Drive
THY = Thyristor
CB = Circuit breaker
AT = Autotransformer
PDP = Power Distribution Panel
CBR = Circuit breaker + Relay

21 various

1 = Speed set from PLC
2 = Speed set from CCS + HC
3 = Speed set from local "FIC/local panel"
4 = Speed set from HC
5 = Temperature set from PLC

22 Notes:

P = Preliminary Power
F = Final Power

CROSSWIND

HOLLANDSE KUST NOORD WIND PARK Project
Contract No. CW-I-WP4-2023-05

ROSETTI MARINO

Sh. 6 of 8

Document Title: ELECTRICAL LOAD LIST

Date: 28/08/2024

Rev. 02

Pos.	1 ITEM	2 Description	3 P&I 1724000448-PR-PID-00013 Sh.	4 Duty Type	5 Duty Operation Condition	6 Type of supply	7 Control Start	7 Control Stop	8 Signals to Control System	9 HW Interlock	10 Special Requirement	11 Power kWU (kW)	11 Power PN (kW)	12 Voltage (V)	13 Frequency (Hz)	14 Current In (A)	15 Starting Current (Is/In)	16 Speed s/min.	17 Cosφ	18 Efficiency	19 Feeder from	20 Starter Type	21 Various	22 Notes	Rev.
1	**JB-500E8 <2>**	Local Control Panel (Electrical Power Section)	/	C	R	N	/	/	/	/	/	46,792	63,564	400-230	50		/	/	0,97	/	**By Client**	CB		P	2
2	**JB-500F8 <2>**	Local Control Panel (Instruments Power Distribution Section) and Fire & Gas Panel	/	C	R	E	/	/	/	/	/	2	2	230	50		/	/	0,9	/	**By Client**	CB		P	2
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	TOTAL											48,792	65,564											P	0

CROSSWIND

HOLLANDSE KUST NOORD WIND PARK Project
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ROSETTI MARINO

Sh. 7 of 8

Document Title: ELECTRICAL LOAD LIST

Date: 28/08/2024

Rev. 02

Pos.	1 ITEM	2 Description	3 P&I 1724000448-PR-PID-00013 Sh.	4 Duty Type	5 Duty Operation Condition	6 Type of supply	7 Control Start	7 Control Stop	8 Signals from-to Control System	9 HW Interlock	10 Special Requirement	11 Power kWU (kW)	11 Power PN (kW)	12 Voltage (V)	13 Frequency (Hz)	14 Current In (A)	15 Starting Current (Is/In)	16 Speed s/min.	17 Cosφ	18 Efficiency	19 Feeder from	20 Starter Type	21 Various	22 Notes	Rev.
1	**P-50003A**	SW Booster Pumps	2	C	R	N	PLC	PLC	R-F	/	/	3,6	4	400	50						**CP-500E1**	DOL	/	P	1
2	**P-50003B**	SW Booster Pumps	2	C	R	N	PLC	PLC	R-F	/	/	/	4	400	50						**CP-500E1**	DOL	/	P	1
3	**P-50002A**	Backwash Pumps	1	C	R	N	PLC	PLC	R-F	/	/	0,6	1,1	400	50						**CP-500E1**	DOL	/	P	0
4	**P-50002B**	Backwash Pumps	1	C	S1	N	PLC	PLC	R-F	/	/	/	(1,1)	400	50						**CP-500E1**	DOL	/	P	0
5	**P-50004A**	HP SWRO Pumps	3	C	R	N	PLC	PLC	R-F-SI-SS	/	/	4,4	7,5	400	50				0,95		**CP-500E1**	VFD	1	P	1
6	**P-50004B**	HP SWRO Pumps	3	C	R	N	PLC	PLC	R-F-SI-SS	/	/	/	7,5	400	50				0,95		**CP-500E1**	VFD	1	P	1
7	**P-50009A**	Fresh Water Pumps	4	C	R	N	PLC	PLC	R-F	/	/	0,296	0,37	400	50	1	5,3	2880	0,7	0,738	**CP-500E1**	DOL	/	F	1
8	**P-50009B**	Fresh Water Pumps	4	C	S1	N	PLC	PLC	R-F	/	/	/	(0,37)	400	50	1	5,3	2880	0,7	0,738	**CP-500E1**	DOL	/	F	1
9	**H-50001**	Electric Heater	1	C	R	N	PLC	PLC	R-F-SS	/	/	30	30	400	50	43,35	/	/	1	/	**CP-500E1**	THY	5	F	1
10	**HHS-50003A**	Container Heater	1	C	R	N	PLC	PLC	R-F	/	/	3	3	400	50	4,34	/	/	1	/	**CP-500E1**	DOL	/	P	1
11	**HHS-50003B**	Container Heater	1	C	S1	N	PLC	PLC	R-F	/	/	/	(3)	400	50	4,34	/	/	1	/	**CP-500E1**	DOL	/	P	1
12	**HFA-5001A**	Container Fan	1	C	R	N	PLC	PLC	R-F	/	/	0,2	0,25	400	50						**CP-500E1**	DOL	/	P	1
13	**HFA-5001B**	Container Fan	1	C	S1	N	PLC	PLC	R-F	/	/	/	(0,25)	400	50						**CP-500E1**	DOL	/	P	1
14	**NL-001**	Lighting circuit		C	R	N	/	/	/	/	/	0,4	0,5	230	50		/	/	0,9	/	**CP-500E1**	CB	/	P	0
15	**LP-S-50010**	UV Sterilizer S-50010	4	C	R	N	PLC	PLC	/	/	/	0,032	0,04	230	50		/	/		/	**CP-500E1**	CBR	/	P	1
16	**LP-A-50003**	Local Panel Coarse Filter A-50003	1	C	R	N	/	/	/	/	/	0,144	0,18	230	50		/	/		/	**CP-500E1**	CB	/	P	0
17	**LP-S-50001**	Local Panel Sand filter S-50001	1	C	R	N	/	/	/	/	/	0,008	0,01	230	50		/	/	0,8	/	**CP-500E1**	CB	/	P	0
18																									
19	**50-LP-001**	Local Control Panel (Instruments Power Distribution Section)		C	R	N	/	/	/	/	/	4	5	230	50	27,17	/	/	0,8	/	**CP-500E1**	CB	/	P	1
20	**LP-S-50004**	Softening Filter	4	C	R	N	/	/	/	/	/	0,008	0,01	230	50	0,054	/	/	0,8	/	**CP-500E1**	CB	/	P	1
21																									
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	TOTAL											46,688	63,46											P	1

CROSSWIND

HOLLANDSE KUST NOORD WIND PARK Project
Contract No. CW-I-WP4-2023-05

ROSETTI MARINO

Sh. 8 of 8

Document Title: ELECTRICAL LOAD LIST

Date: 28/08/2024

Rev. 02

Pos.	1 ITEM	2 Description	3 P&I 1724000448-PR-PID-00013 Sh.	4 Duty Type	5 Duty Operation Condition	6 Type of supply	7 Control Start	7 Control Stop	8 Signals to Control System	9 HW Interlock	10 Special Requirement	11 Power kWU (kW)	11 Power PN (kW)	12 Voltage (V)	13 Frequency (Hz)	14 Current In (A)	15 Starting Current (Is/In)	16 Speed s/min.	17 Cosφ	18 Efficiency	19 Feeder from	20 Starter Type	21 Various	22 Notes	Rev.
1	**P-50005A**	Soda Dosing Pumps	5	C	R	N	/	/	/	/	/	0,022	0,022	230	50		/	/		/	**CP-500E1**	CB	/	P	1
2	**P-50005B**	Soda Dosing Pumps	5	C	S1	N	/	/	/	/	/		(0,022)	230	50		/	/		/	**CP-500E1**	CB	/	P	1
3	**P-50006A**	Antiscalant Dosing Pumps	5	C	R	N	/	/	/	/	/	0,022	0,022	230	50		/	/		/	**CP-500E1**	CB	/	P	1
4	**P-50006B**	Antiscalant Dosing Pumps	5	C	S1	N	/	/	/	/	/		(0,022)	230	50		/	/		/	**CP-500E1**	CB	/	P	1
5	**P-50007A**	Biocide Dosing Pumps to Container Inlet	6	C	R	N	/	/	/	/	/	0,02	0,02	230	50		/	/		/	**CP-500E1**	CB	/	P	1
6	**P-50007B**	Biocide Dosing Pumps to Container Inlet	6	C	S1	N	/	/	/	/	/		(0,02)	230	50		/	/		/	**CP-500E1**	CB	/	P	1
7	**P-50008A**	Biocide Dosing Pumps to Seawater Intake	6	C	R	N	/	/	/	/	/	0,02	0,02	230	50		/	/		/	**CP-500E1**	CB	/	P	1
8	**P-50008B**	Biocide Dosing Pumps to Seawater Intake	6	C	S1	N	/	/	/	/	/		(0,02)	230	50		/	/		/	**CP-500E1**	CB	/	P	1
9	**P-50010A**	Biocide Dosing Pumps to Wastewater Tank	6	C	R	N	/	/	/	/	/	0,02	0,02	230	50		/	/		/	**CP-500E1**	CB	/	P	1
10	**P-50010B**	Biocide Dosing Pumps to Wastewater Tank	6	C	S1	N	/	/	/	/	/		(0,02)	230	50		/	/		/	**CP-500E1**	CB	/	P	1
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	TOTAL											0,104	0,104											P	0