Agenda Item No F-9

DATE SUBMITTED	01/16//2015	CITY COUNCIL ACTION (X)
		PUBLIC HEARING REQUIRED ( )
SUBMITTED BY	Public Serv. Dir.	RESOLUTION ( )
		ORDINANCE 1ST READING ( )
DATE ACTION REQUIRED	01/21/2015	ORDINANCE 2ND READING ( )

IMPERIAL CITY COUNCIL
AGENDA ITEM

SUBJECT: DISCUSSION/ACTION: WASTEWATER TREATMENT PLANT HEADWORKS UPGRADE-EQUIPMENT BIDS

1. AWARD CONTRACT TO TROJAN TECHNOLOGIES IN THE AMOUNT OF $289,048.00 FOR ONE (1) SALSNES MICROSCREENS
2. AWARD CONTRACT TO HUBER TECHNOLOGY IN THE AMOUNT OF $301,463.00 FOR TWO (2) RPPS ROTAMAT SCREENS.

DEPARTMENT INVOLVED: PUBLIC SERVICES

BACKGROUND/SUMMARY:
Part of the upgrades at the wastewater plant is the installation of screens. City staff working with Webb Associates Engineering has identified the equipment needed. Through the selection process, it is recommended that the City purchase the equipment then bid the installation separately. Staff and consultant engineer recommend awarding the bids to Trojan Technologies for the Salsnes Microscreens and Huber Technology for the RPPS Rotamat Screens. Recommendation letter from Webb Associates is attached for review.

FISCAL IMPACT: $590,511.00

STAFF RECOMMENDATION: Council approves the request to award contracts as presented.

MANAGER'S RECOMMENDATION: MANAGER'S INITIALS *MDB*

MOTION:

SECONDED:		APPROVED	( )	REJECTED ( )
AYES:		DISAPPROVED	( )	DEFERRED ( )
NAYES:				
ABSENT:		REFERRED TO:		

ALBERT A. WEBB ASSOCIATES

Corporate Headquarters
3788 McCray Street
Riverside, CA 92506
951.686.1070

Palm Desert Office
36-951 Cook Street #103
Palm Desert, CA 92211
760.568.5005

Murrieta Office
41391 Kalmia Street #320
Murrieta, CA 92562
951.686.1070

January 2, 2015

Mr. Jackie Loper
City of Imperial
420 South Imperial Avenue
Imperial CA 92251

RE: Wastewater Treatment Plant Headworks Upgrade – Equipment Bids

Dear Jackie:

On behalf of the City, WEBB Associates solicited equipment bids from the following vendors to provide new equipment to be utilized as part of the new headworks upgrade at the Wastewater Treatment Plant (WWTP). Each vendor could bid on Schedule #1 (Headworks Screens) and/or Schedule #2 (Microscreen).

Vendor List

1. Coombs Hopkins Company
2. Goble Sampson, Inc.
3. Mitcherson, LLC
4. Misco, Inc.
5. JBI Water, Inc.
6. Saddleback Environmental

Equipment bids were received on November 24, 2014. The City received three bids as follows (Complete bids included as Appendix C, D, & E respectively).

Bidder/Manufacturer	Equipment	Bid Amount
Coombs Hopkins (Trojan Technologies)	Microscreen	$289,048.00
Mitcherson (Ecosieve)	Microscreen	$285,081.32
Goble Sampson (Huber Technologies)	Headworks Screens	$301,463.00

Bid Evaluation

The bids were reviewed by Albert A. Webb Associates on November 24, 2014. Webb Associates reviewed the bids to verify the equipment met the project specifications, to understand the complete scope of supply, review warranty information, and understand any exclusions or exceptions taken. A detailed breakdown of the bid review is located in Attachment A and B. Once the bids were reviewed and verified, the bid evaluation and ranking was performed. A detailed breakdown of the bid ranking is also included in Attachment A and B.

Recommendation

Based upon Webb Associates' review of the bids and evaluation ranking, we recommend awarding contracts to Trojan Technologies in the amount of $289,048 for one (1) of their Salsnes Microscreens and Huber Technology in the amount of $301,463 for two (2) of their RPPS Rotamat Screens. It should be noted that although the Mitcherson Ecosieve bid price was slightly lower ($1,510) in initial cost than the Trojan Technology bid, our recommendation is to award the contract to Trojan Technologies based upon the following criteria.

- The Ecosieve unit is larger and will require additional installation costs
- The Ecosieve unit has no similar installations, whereas Trojan has 600 installations worldwide

Should you have any questions regarding this information, please contact me at (951) 830-3389.

Sincerely,

ALBERT A. WEBB ASSOCIATES

Brian P. Knoll, P.E.

Vice President

Attachment A

Evaluation Criteria and Ranking Matrix

Microscreen

Imperial Headworks Upgrade
12/1/2014

Bid Item #2 - Microscreen System

Name	SF6000 Salsnes Filter	Mitcherson EcoSieve ES-3600
Total Cost	**$ 304,973.00**	**$ 327,498.32**
Equipment Cost	$ 270,022.00	$ 271,389.00
Submittal Cost	$ 14,500.00	$ 13,692.32
Spare Parts Cost	$ 4,526.00	$ 2,457.00
Freight	Included	Included
Start-up Cost	Included	Included
Installation Cost*	$ 15,925.00	$ 39,960.00
Taxes (if not included in the proposal)	Included	Included

Name	SF6000 Salsnes Filter	Mitcherson EcoSieve ES-3600
1. Name and Address	Yes	Yes
2. Lead Time - Submittals	4-6 Weeks	2-3 Weeks
3. Lead Time - Delivery	16 Weeks	14-15 Weeks
4. General Cut Sheets	Yes	Yes
5. References	6 in US; 6 internationally	5 in US (not equipment references)
6. Spare Parts	Yes	Yes
6.a. List of All Spare Parts, Costs, and Expected Life	1 Motor for filter mesh/dewatering unit = $834 (5-7 years)	Filter Belts = $2,275
	1 Blower Filter = $65 (6 months)	Nylon Brushes = $225 (3-6 months)
	1 Filter Drive Gear Box = $1,656 (5-7 years)	
	2 Bearings w/housing, drive roller = $89 (2-4 years)	
	1 Bearing w/housing, under roller = $76 (2-4 years)	
	1 Level Sensor Filter Mesh = $1,170 (3-5 years)	
	(2) Guide Roller Seal, (2) Roller Ball Bearing, (4) Roller Sealing Disk, and Roller External Circlip = $312 (2-4 years)	
7. Equipment Specs	Yes	Yes
8. Contact Person	Jordan Fournier (Trojan Technologies); Matt Rebmann (Coombs Hopkins Company)	Michael Anderson
9. Equipment Controls	Yes	Yes
10. Materials	316L SS	316L SS
11. Additional References	No	No
12. Experience	Yes. 600 units in operation.	No. The firm's references are the management's prior experience.
13. Warranties	(a) 12 months, (b) 18 months	(a) 12 months, (b) 18 months
14. Date Warranty Starts	(a) after start-up, (b) after delivery	(a) after start-up, (b) after delivery
15. Estimated Footprint	9.1' x 8.75'	18' x 11.1'
16. Additional Remarks	-	-
17. Exclusions and Exceptions	G-24: Salsnes Equipment has not been desinged for compliance with nor reviewed against the requirements of the California Building Code. If this is required it is outside of the scope of this proposal.	The Ecosieve has a larger footprint and weight than specified. This does not preclude the design compatability with the existing system, and it actually increases ease of maintenance.
	1.3.C: Vast majority of unit will be 316L SS. Certain components will not be, however they will be of a suitable material.	Headloss is a fixed 25" and is a self-draining system that has no low points in the filtered water flow to accumulate un-wanted solids.
	1.3.D: Blower, Control Panel, and any other ancillary equipment will not be Class 1 Div. 1.	Contains (2) rotating filter belts.
	2.2: The filter will meet 40% TSS (average) at Averago flow.	EcoSieve does not require a blower system and is therefore not included.
	2.3.A.4.f: 3" plain pipe connection will be provided for blower air, 8" plain pipe connection will be provided for exhaust air	Requires one 1" NPT connection for cold water and one 1" NPT connection for hot water.
18. Shop Drawings: (1) Manufacturer's installation drawings, (2) Wiring and schematic diagrams.	Not included in bid. To be provided by installing contractor.	Not included in bid. To be provided by installing contractor.
19. Operations Manual	Yes	-
*Installation Cost Items Considered	Installation Cost includes unit footprint and any maintenance and specific requirements. $200/sf was used.	Installation Cost includes unit footprint and any maintenance and specific requirements. $200/sf was used.

Evaluation Criteria	Weighted Value	Impact Value	Impact Value
Operability	3	4	4
Installed Capital Cost	5	4	4
Experience	3	4	1
Lead Time	4	4	5
Warranties	2	4	4
Owner's Preference	4	4	4

Evaluation Criteria	Total Score	Total Score
Operability	12	12
Installed Capital Cost	20	20
Experience	12	3
Lead Time	16	20
Warranties	8	8
Owner's Preference	16	16
	84	**79**

Attachment B

Evaluation Criteria and Ranking Matrix

Headworks Screens

Imperial Headworks Upgrade
12/1/2014

Bid Item #1 - Tank Mounted Fine Screens with Screenings Washing

Name	**(2) Huber - ROTAMAT (Fine Screen RPPS 1400T/3)**
Total Cost	**$ 320,391.00**
Equipment Cost	$ 262,919.00
Submittal Cost	$ 15,000.00
Spare Parts Cost	Included
Installation Cost*	$ 18,928.00
Taxes (if not included in the proposal)	$ 23,544.00

1. Name and Address	Yes
2. Lead Time - Submittals	4-6 Weeks
3. Lead Time - Delivery	20 Weeks
4. General Cut Sheets	Yes
5. References (5 Requested)	4 (all US references)
6. Spare Parts	Yes
6.a. List of All Spare Parts, Costs, and Expected Life	(1) Roller = $463.50 (5 years)
	Bearing = $1,622 (5 years)
	Brushes = $588 (5 years)
	Screw Flight (Hopper Zone) = $101 (5 years)
	Screw Flight (Press Zone) = $255 (5 years)
7. Equipment Specs	Yes
8. Contact Person	Dave Ritter
9. Equipment Controls	Yes
10. Materials	316 SS
11. Additional References	Yes
12. Experience	Yes
13. Warranties	Either: (a) 12 months or (b) 18 months
14. Date Warranty Starts	Whichever occurs first: (a) completion of installation, start-up, or owner acceptance, or (b) date of delivery
15. Estimated Footprint	16.9' x 5.6'
16. Additional Remarks	-
17. Exclusions and Exceptions	Part 1, A: Huber will not provide ancillary supports, process piping valves, elbows, etc. that are not standard, directly welded or machines to the equipment.
	Part 2, 2.3, E: 3. Huber will provide a 20" ANSI outlet. 4. Huber will not provide odor control inlet screens.
18. Shop Drawings: (1) Manufacturer's installation drawings, (2) Wiring and schematic diagrams.	Not included in bid. To be provided by installing contractor.
19. Operations Manual	Yes

*Installation Cost Items Considered	Installation Cost includes unit footprint and any maintenance and specific requirements. $200/sf was used.

Evaluation Criteria	Weighted Value	Impact Value
Operability	3	4
Installed Capital Cost	5	4
Experience	3	4
Lead Time	4	4
Warranties	2	4
Owner's Preference	4	4

Evaluation Criteria	Total Score
Operability	12
Installed Capital Cost	20
Experience	12
Lead Time	16
Warranties	8
Owner's Preference	16
	84

Attachment C

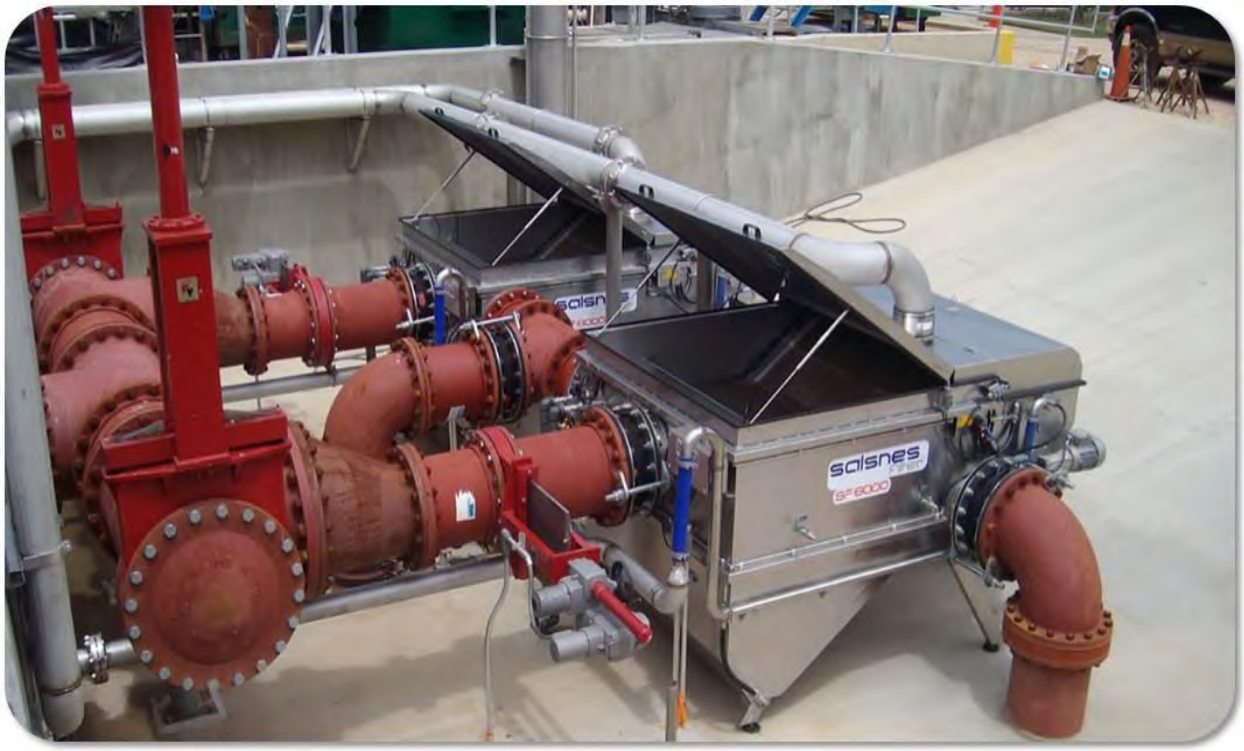
Trojan Technology

Microscreen Bid

REQUEST FOR PROPOSAL - FURNISH EQUIPMENT FOR THE CITY OF IMPERIAL WWTP HEADWORKS UPGRADE

FOR THE

CITY OF IMPERIAL, CALIFORNIA



SUBMITTED BY TROJAN TECHNOLOGIES

JORDAN FOURNIER	TROJAN TECHNOLOGIES	jfournier@trojanuv.com	519.457.3400
MATT REBMANN	COOMBS HOPKINS COMPANY	matt@coombshopkins.com	760.931.0555

NOVEMBER 2014

November 24, 2014

Mr. Brian Knoll, PE.
Albert A. Webb Associates
3788 McCray St
Riverside, CA 92506
T. 951.248.4279

Subject: **Request for Proposal - Furnish Equipment for the City of Imperial WWTP Headworks Upgrade**

Dear Mr. Knoll;

We are pleased to submit the enclosed Salsnes Filter proposal for the City of Imperial Wastewater Treatment Plant (WWTP) Headworks Upgrade project. In addition to the information enclosed within this proposal, I have summarized the design and key differentiating benefits with the Salsnes Filter.

Salsnes Filter Design Summary:

The design presented herein consists of a single SF6000 Salsnes Filter Unit. The Salsnes unit includes a continuous loop moving mesh screen (filter mat), pneumatic belt cleaning system and air blower, discharge screw press and conveyor for sludge, and system control panel for automatic operation. The unit is capable of removing 40% of the TSS at the average flow rate of 2.4 MGD.

Points of Differentiation:

I would like to bring to your attention a number of benefits uniquely offered by Salsnes.

The Salsnes Filter system provides compact, flexible and cost-effective solids separation for primary wastewater, stormwater and industrial applications. Three critical processes – solids separation, primary sludge thickening and dewatering – are performed in one compact unit that can completely replace conventional primary treatment and does so in a fraction of the footprint – saving costs and valuable land space.

Our patented Air Knife automatic cleaning system uses air to clean the filtermesh, which has many benefits compared to scrapers, brushes or water-based cleaning systems. Air is gentler on both the mesh (elongating its life) and on particles (so they don't just break into smaller pieces). Air cleaning also keeps sludge drier for more effective and less costly dewatering.

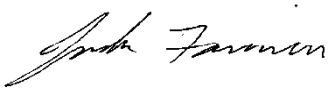
The Salsnes Filter system defines eco-efficient. This cost-effective, high-performing, chemical-free and sustainable solids separation technology has demonstrated itself in hundreds of installations around the world – including some of the most challenging industrial process applications.

In 2012, Salsnes Filter became a Trojan Technologies company. The Salsnes Filter technology aligns closely with Trojan's municipal business and corporate goal of providing sustainable technologies and smaller footprint solutions – to ensure greater water confidence and environmental stewardship for industries and municipalities around the world.

Trojan and Salsnes stand behind every Salsnes Filter system that we design and manufacture and will continue to support it for the lifetime of the system. Trojan offers a 1-800 number with qualified Technicians available 24-hours / 7 days a week for emergency support.

We would like to thank the City of Imperial and Albert A. Webb Associates for the invitation to submit our proposal for this project. If you have any questions or require any additional information for the evaluation please do not hesitate to contact our local representative Matt Rebmann (Tel. (760) 931-0555); or myself at (519) 457-3400.

With best regards,
Trojan Technologies



Jordan Fournier
Regional Sales Manager
jfournier@trojanuv.com

Encl.

Table of Contents

Bid Forms

Contract Completion Schedule

Item of Work	Calendar Days for Completion Contract Completion Time	Bidder's Completion Time
1. Receipt by the City of complete, approved manufacturer's shop drawings and installation instructions (includes 14 days for Engineer's review).	60*	56
2. Delivery of equipment to the project site:		
a. Complete and Operable Equipment Ready for Delivery	225*	168

* Commencing on Date of "Notice to Proceed" issued by the City of Imperial during the design phase of the project.

Work shall be completed per the Contract Completion Time, unless Alternate Completion Times, herein references as "Bidder's Completion Time", is proposed by Bidder, as set forth herein, and is approved by Owner.

Equipment Supplier is advised that "Liquidated Damages" of $1,500.00 per calendar day, including Saturdays, Sundays, and Holidays, may be assessed for each calendar day each item or sub-item of work remains incomplete after the Contract Completion Time in accordance with the CONTRACT COMPLETION TIME or the BIDDER'S COMPLETION TIME, whichever is in force. Equipment as delivered shall be complete and operable requiring only installation. Contract is subject to "Liquidated Damages" due to delays in performing remedial work if equipment as determined by the City of Imperial does not perform as specified. Total amount of Liquidated Damages shall not exceed 10% of the Total Contract Amount.

The City of Imperial or selected Contractor will transmit a "Notice to Proceed" to Equipment Supplier upon receipt of an executed Agreement or Purchase Order. Thereafter, the Equipment Supplier shall commence ordering equipment and preparation of shop drawings.

F. Contract Manager

The Supplier shall provide one Contract Manager who shall be responsible for the performance of the work. The name of this person and an alternate who shall act for the Supplier when the manager is absent shall be designated in writing as part of this Proposal. The Contract Manager or alternate shall have full authority to act for the supplier on all contract matters relating to the daily operation of this contract.

G. Equipment

REFERENCE SPECIFICATION DETAILS IN EXHIBIT TWO.

Supplier shall provide "New" equipment as defined as newly assembled for first-time use with new components. It must be eligible for a minimum one-year warranty.

V. EVALUATIONS AND SELECTION PROCESS

A. Evaluation Criteria

The following criteria will be utilized in the evaluation of bids:

Operability – This criterion addresses the relative ease of operating and maintaining the system. Equipment operability will be evaluated on the method for operation of the equipment as well as scheduled preventative maintenance. The seller shall detail equipment operation and routine maintenance in their respective proposal. Key items that will be considered for this criterion are as follows:

- Equipment that requires minimal preventative maintenance to maintain system performance.
- Equipment that allows for easy access for plant personnel to perform routine tasks without disrupting plant operation and without placing the personnel in harm's way.
- A lower cost for providing recommended spare parts.

Installed Capital Cost – Compares the actual cost of the equipment as well as footprint size and other factors that affect the total installation cost associated with the equipment. Each piece of equipment is inherently different, and the Supplier shall provide as much information as possible to assist the City of Imperial in determining final installation cost.

Experience – Used to compare the experience of the vendors on facilities of similar size, complexity, and type of installation.

Lead Time – Lead time to receive submittals and lead time for delivery of equipment upon approval of submittals.

Warranties – Evaluate the warranty provided and any differences between vendor warranties. Favorable results will be given to suppliers that provide the following:

- Warranties of extended duration.
- Warranties that are not limited by proration.
- Warranties that also include service.
- Warranties that cover all parts and components of a system.

Owner's Preference – the City of Imperial will provide input on the system that best fits its needs.

The following table indicates the established, weighted rating system:

Evaluation Criteria	Weighted Value
Operability	3
Installed Capital Cost	5
Experience	3
Lead Time	4
Warranties	2
Owner's Preference	4

B. Selection Process

The Owner will evaluate each item proposed using the evaluation criteria. A rating score between 1 and 5 will be assigned for the evaluation criteria for each proposed items. These will be totaled and the proposed item with the highest score will be recommended to the City of Imperial for selection. Any information that will assist the City of Imperial and Engineer in evaluating the proposals based on the criteria listed above is encouraged. The technical proposal should address all the above items or the proposal will be considered non-responsive. **Price shall be considered, but need not be the sole determining factor.**

C. References

Supplier shall include a list of a minimum of five references, from similar projects only, who could attest to the firm's knowledge, quality of work, timeliness, diligence, flexibility, and ability to meet budget constraints, include names, contact persons, and phone numbers of all references.

References may or may not be reviewed or contacted at the discretion of the City of Imperial. Typically, only references of the top ranked shortlist of supplier or suppliers are contacted. The City of Imperial reserves the right to contact references other than, and/or in addition to, those furnished by a supplier.

VI. BASIS FOR AWARD

A. General

Information and/or factors gathered during interviews, negotiations and any reference checks, in addition to the evaluation criteria stated in the RFP, and any other information or factors deemed relevant by the City of Imperial, shall be utilized in the final award.

B. No Contact Policy

After the date and time established for receipt of proposals by the City of Imperial, any contact initiated by any supplier with any the City of Imperial representative, other than the Purchasing Division representative listed herein, concerning this request for proposals is prohibited. Any such unauthorized contact may cause the disqualification of the supplier from this procurement transaction.

C. Request for Further Information

Questions, which may arise as a result of this RFP, may be directed to the Brian Knoll, PE at brian.knoll@webbassociates.com

VII. PROPOSAL FORMAT

A. General

Proposals must include fully completed Exceptions, References, and Signature Sheet as well as Cost Proposal and Contract Completion Schedule.

B. Cost Proposal

All suppliers must utilize the format below.

BIDDING SHEET #2 – MICROSCREEN SYSTEM

The undersigned hereby proposed to furnish and deliver the following items of equipment to the City of Imperial, all in strict accordance with the attached and/or incorporated Special Requirements, Technical Specifications, and Drawings, for the following Bid prices:

Bid Item A - Furnish and deliver one (1) microscreen system to provide as detailed in the technical specifications with all appurtenances and patent and/or license fees for a complete system, all for the lump sum of

$ 270,022 * (Figures)

$ TWO HUNDRED SEVENTY THOUSAND AND TWENTY TWO * (Written)

Bid Item B - Firm Price for the supply of the manufacturer's shop drawings:

$ 14,400 * (Figures)

$ FOURTEEN THOUSAND FOUR HUNDRED * (Written)

Bid Item C - Firm Price for the supply of the manufacturer's recommended spare parts not included in the price above (attach list showing individual components and costs):

$ 4,526 * (Figures)

$ FOUR THOUSAND FIVE HUNDRED TWENTY SIX * (Written)

* **The above prices include any amount payable by the City of Imperial for taxes by reason of this contract.**

Suppliers must include **all** proposed costs for performance under the contract. Suppliers must provide all personnel and other resources required to complete the contract. Suppliers are solely responsible for start-up and transition expenses. Any costs that cannot be determined, based on the available information, should be indicated and explained.

Does Proposed Equipment meet **All** of the Specifications? NO
If No, please make notations on Exceptions sheet.

BIDDER: TROJAN TECHNOLOGIES

AUTHORIZED SIGNATURE: Josh Farmer

TITLE: REGIONAL SALES MANAGER

VIII. PAYMENT SCHEDULE

Payment for the work will be based on the Bid price and will be paid in accordance with the following Delivery Schedule.

Item	Percent of Bid Price*
Shop Drawings	5%
Delivery of All Equipment to the Project Site	70%
Submission of Installation Certificate to the City of Imperial	10%
Successful Equipment Start-Up, Test, and Training	10%
Final Payment (35 days after the City of Imperial files Notice of Completion)	5%

*Excludes cost of service engineer time, which will be paid as it is performed.

Award of Construction Contract and Start of Construction for the project are scheduled to occur January 2015. All bid items that are awarded as part of this contract will be awarded and managed by the City as "Owner Furnished Equipment". The proposed startup and operation of the project is scheduled to commence in May 2015. It is not the intent to withhold the Equipment Supplier's payment due to installation problems that are beyond his control.

IX. GENERAL PROPOSAL INFORMATION

A. Contract Manager

Name: Brian Knoll, PE
Office Phone Number: (951) 200-8601
E-Mail Address: Brian.knoll@webbassociates.com

B. Technical Literature

Detailed descriptive literature for all equipment being offered must be included with the proposal. Such literature must provide information on electrical wiring needs, space requirements and all technical data required for a full evaluation. **Failure to provide technical literature may be cause for rejection of proposal.**

C. Preventative Maintenance Schedule

The manufacturer's recommended preventative maintenance schedule for each piece of equipment proposed must be included with your proposal.

D. Owner's Manual

Supplier shall supply an operator's manual with each unit at time of delivery.

EXCEPTIONS

Please state below any and all exceptions that you are taking to any portion of this Request for Proposals. If not addressed below, the City of Imperial then assumes that the vendor will adhere to all terms and conditions as contained in the proposal document.

BID ITEM #2 – MICROSCREEN SYSTEM, PART 2: PRODUCTS, 2.2 PERFORMANCE REQUIRMENTS, B. Performance Requirements, 1. At the specified peak flow rate the Filter System will be capable of removing at least 40% TSS (average).

Trojan Exception: 1 SF6000 will meet 40% TSS (average) at Average flow.

REFERENCES

Please list below name of business, address, telephone number, and contact person.

1. **Please see reference list under "Experience" section of this proposal**

2. _____

3. _____

4. _____

5. _____

SIGNATURE SHEET

My signature certifies that the proposal as submitted complies with all Terms and conditions as set forth in RFP.

My signature also certifies that this firm has no business or personal relationships with any other companies or persons that could be considered a conflict of interest or potential conflict of interest to the City of Imperial, pertaining to any and all work or services to be performed as a result of this request and any resulting contract with the City of Imperial.
I hereby certify that I am authorized to sign as a Representative for the Firm:

Name of Firm: TROJAN TECHNOLOGIES

Address: 3020 GORE ROAD LONDON ONTARIO CANADA N5V 4T7

Fed ID No.: 98-0518207

Name (type/print): JORDAN FOURNIER

Title: REGIONAL SALES MANAGER

Telephone (519) 457-3400

Fax No. (519) 457-3030

Date: NOVEMBER 24 2014

To receive consideration for award, this signature sheet must be included with the bid, as it shall be a part of your response.

SIGNED:

Evaluation Criteria

Contract Manager

The Supplier shall provide one Contract Manager who shall be responsible for the performance of the work. The name of this person and an alternate who shall act for the Supplier when the manager is absent shall be designated in writing as part of this Proposal. The Contract Manager or alternate shall have full authority to act for the supplier on all contract matters relating to the daily operation of this contract.

TROJAN RESPONSE: Trojan's Contract Manager for this project will be Darren Preete. Darren can be reached at dpreete@trojanuv.com or at 519-457-3400. Darren's alternate will be Marc Bilodeau. Mark can be reached at mbilodeau@trojanuv.com or 519-457-3400.

Darren will also be Salsnes' representative who will be available both by phone and in person to provide technical information relative to the installation of the specific equipment being furnished.

Operability

The seller shall detail equipment operation and routine maintenance in their respective proposal. Key items that will be considered for this criterion are as follows:

- **Equipment that requires minimal preventative maintenance to maintain system performance.**
- **Equipment that allows for easy access for plant personnel to perform routine tasks without disrupting plant operation and without placing the personnel in harm's way.**
- **A lower cost for providing recommended spare parts.**

TROJAN RESPONSE: The Salsnes filter has been designed to provide reliable 24 hours per day service with minimal operator intervention. As with all machines certain levels of operator interaction and regular maintenance routines and checks will be required. The following product description gives a system overview highlighting main components with typical required information for system operation and maintenance.

System Overview

This system is used for wastewater treatment where the water coming in for treatment is piped. The different models all perform the same function, but are scaled for different volumes of water. The system is used for primary filtering of municipal wastewater effluent, and for industrial applications such as the fishing industry, fish net laundry facilities, pulp and paper industry, breweries, food processing industry, textile industry, tanneries, cruise ships, etc.

System Components

The system is designed and produced to reduce the total suspended solids and consists of three separate components.

- Filter
- Air blower
- Control Power Panel (CPP)

The air blower consists of an electrical blower that produces air for cleaning the filter mesh.

In the basic system all controls and start/stop mechanisms are centralized in the Control Power Panel (CPP). For certain installations, the functionality of the Control Power Panel (CPP) will be an integrated part of the main control system for the whole plant.

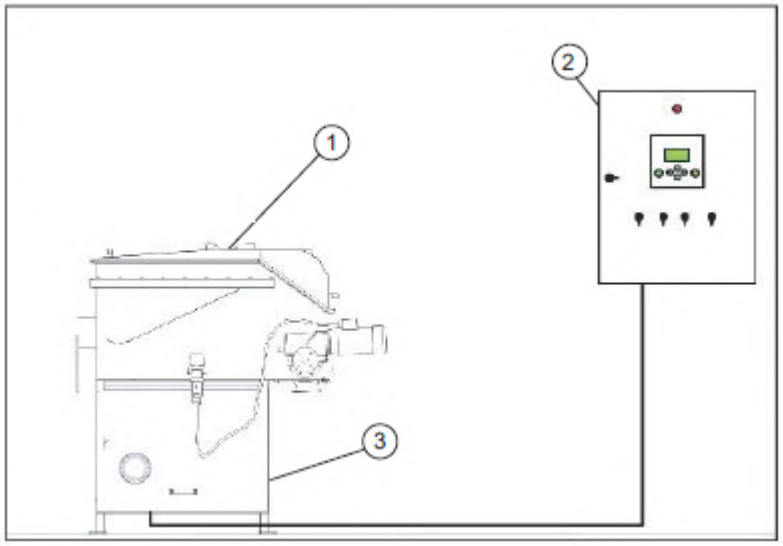


Figure 1 Main Components

1	Filter	2	Control Power Panel (CPP)
3	Air Blower		

Overview of Sequence and Principle

The system is controlled by the Control Power Panel (CPP).

1. Raw wastewater enters the system through the inlet flange.
2. The filter mesh filters the raw wastewater. Filtered water then flows through the outlet flange.
3. The sludge accumulated on the filter mesh is removed by the air knife device into the sludge screw cavity.
4. Sludge is transferred by auger to a collection system (not supplied) or dewatering unit.

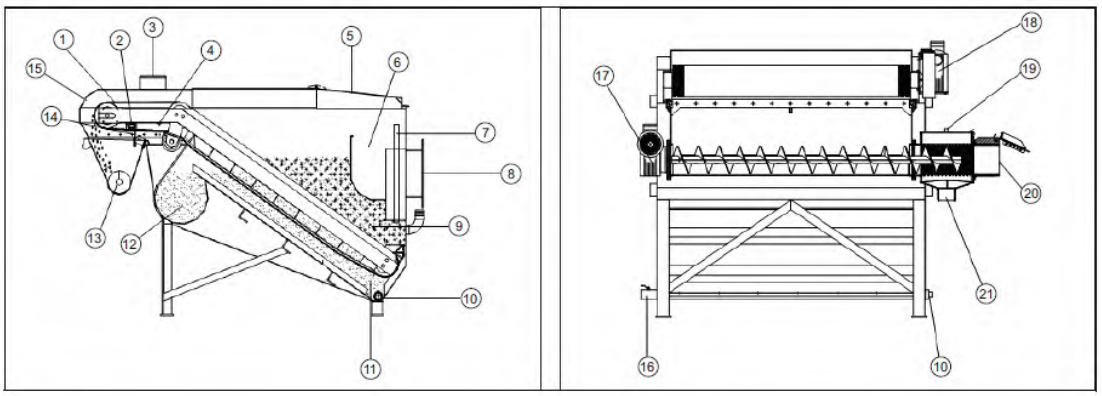


Figure 5 Details

1	Filter Mesh	**2**	Air Knife
3	Ventilation	**4**	Flushing Nozzle
5	Inlet Lid	**6**	Overflow
7	Level Transmitter	**8**	Inlet
9	Untreated wastewater	**10**	Bottom Flush
11	Filtered Wastewater	**12**	Outlet
13	Sludge Auger	**14**	Rubber Scraper
15	Sludge Auger Lid	**16**	Drain
17	Motor, Sludge Screw	**18**	Motor, Filter Mesh
19	Dewatering Unit Lid (optional)	**20**	Dewatering Unit sludge outlet (optional)
21	Outlet, Dewatering Unit Wastewater (optional)		

Basic Setup Data

The following setup parameters are valid for all units with the system specified control system.

The control system supplied has all the default values pre-programmed.

Water levels have the outlet threshold as a reference point zero (0) (Refer to Table 2). A ruler is mounted on the sidewall of the unit to read the actual levels above or below the 0 level. (Refer to Figure 6).

Table 2 Water levels SF series

	Level pressure transmitter (bottom of level sensor referencing outlet threshold as zero)	Water level - Start	Max drive speed level**	Water level - Stop	Water level - Overflow
SF1000	60 mm (2.4 in)	95 mm (3.7 in)	215 mm (8.45 in)	65 mm (2.6 in)	245 mm (9.6 in)
SF2000	- 45 mm (-1.8 in)	140 mm (5.9 in)	260 mm (10.2 in)	100 mm (3.9 in)	300 mm (11.8 in)
SF4000	- 145 mm (- 5.7 in)	160 mm (6.3 in)	280 mm (11.0 in)	120 mm (4.7 in)	320 mm (12.6 in)
SF6000	- 145 mm (-5.7 in)	165 mm (6.5 in)	290 mm (11.4 in)	125 mm (4.9 in)	345 mm (13.5 in)

** The motor has reached 60hp at this water level. For example: SF2000 water level 130mm above 0 will mean the motor is at 50% or 30hp.

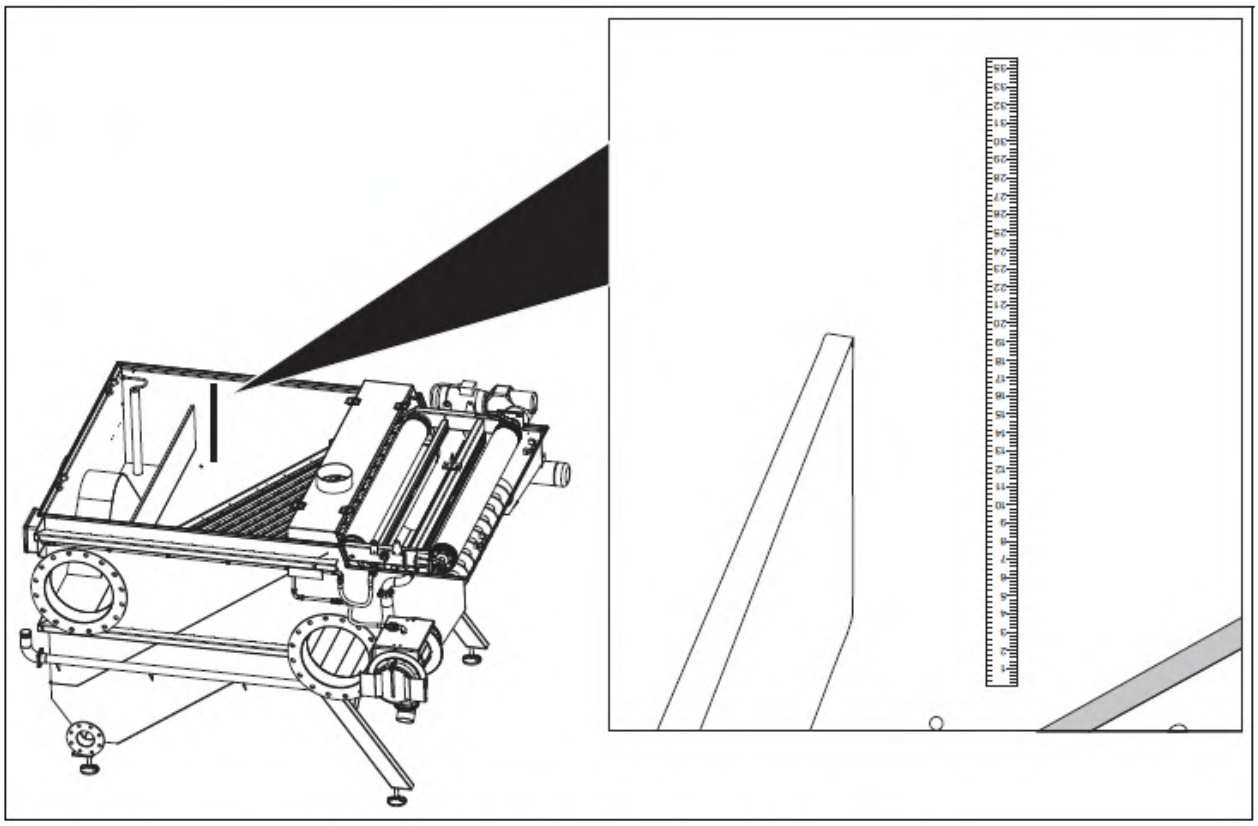


Figure 6 Ruler for Level Measurement

Switches and Indicators

The following control switches and indicators are needed in the control system for operation of the system:

Switch/Indicator	Functions	Description
Filter Mode Selector Switch	Local	Allows filter to run at last pre-set settings. Settings can be adjusted on variable frequency drives.
	Off	Turns system off.
	OIT Mode	Controlled from the Control Power Panel OIT screen.

Modes

The system can run in two basic operational modes.

Automatic control

This mode is used for normal operation. It will be set for the running of the filter mesh, sludge auger, and water flushing independently.

In this mode, the speed, running period, and running time of the filter mesh, sludge auger, and water flushing are fully controlled by the Programmable Logic Controller (PLC)/frequency inverter system. The input to the operation comes from the water level sensor.

The ranges of regulation for different parameters are adjusted during the trial-run period for optimal performance. Refer to Table 2 for initial settings.

There is an additional mode for “Local” where the filter, sludge auger, and blower all run at the preset manual device speed.

Manual Control

The following functions may be overridden for maintenance, test and service purposes:

- Manual control of air blower
- Manual motor control
- Manual value control

Navigate the User Interface

The user interface for the controller uses touchscreen technology. Do not use the writing tips of pens or pencils or other sharp objects to make selections on the screen. Use only a clean, dry fingertip or the eraser tip of a pencil.

System Settings

The configuration settings for the system are accessed, reviewed or changed through the System Settings Screens. Push the numeric entry box, enter the value, then push ENTER. Use the pop-up numeric touch pad to enter the desired value.

System Overview Screens

Filter Screen

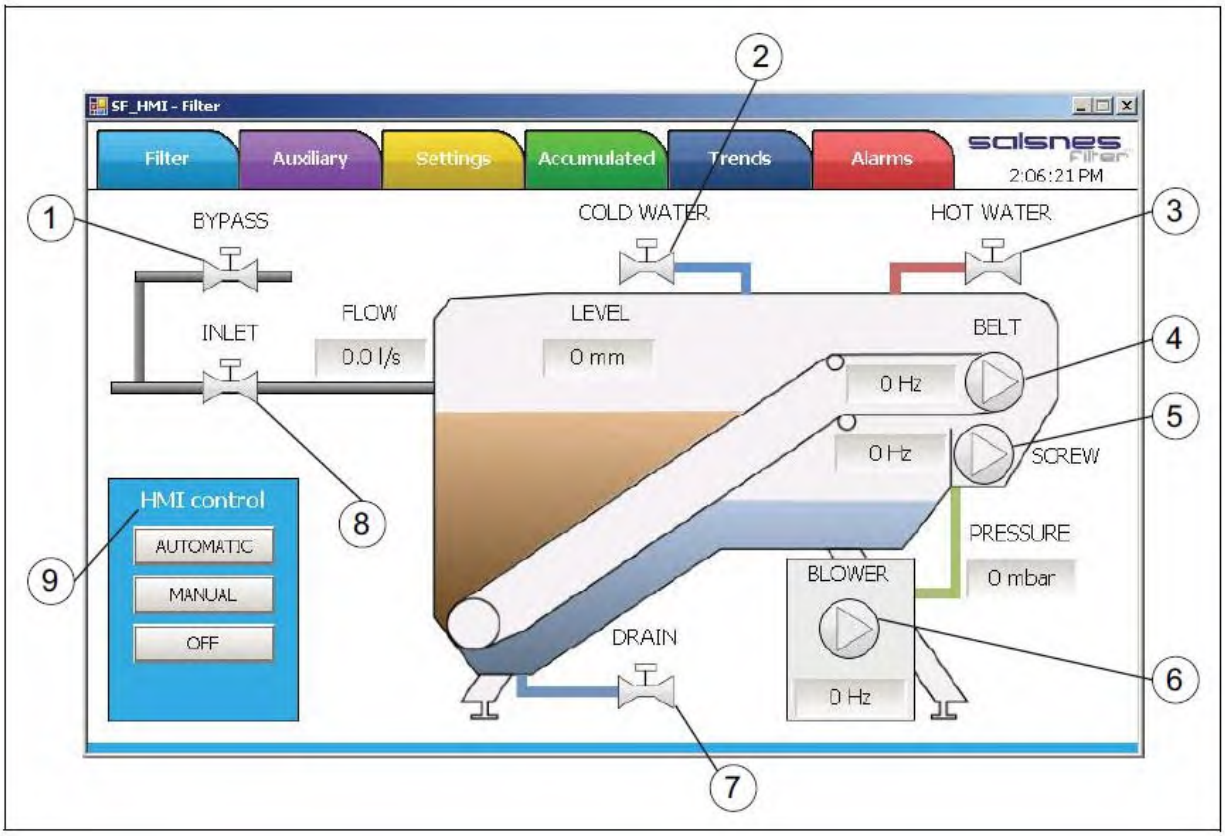


Figure 9 Filter Screen

1	Bypass button	**2**	Cold water button
3	Hot water button	**4**	Belt button
5	Screw button	**6**	Blower button
7	Drain button	**8**	Inlet button
9	HMI control (Automatic, Manual, Off) buttons		

Level Control

Figure 11 Level Control

Advanced Level Control

Figure 12 Advanced Level Control

Washing

Figure 13 Washing

Motor Control

Figure 14 Motor Control

Advanced Motor Control

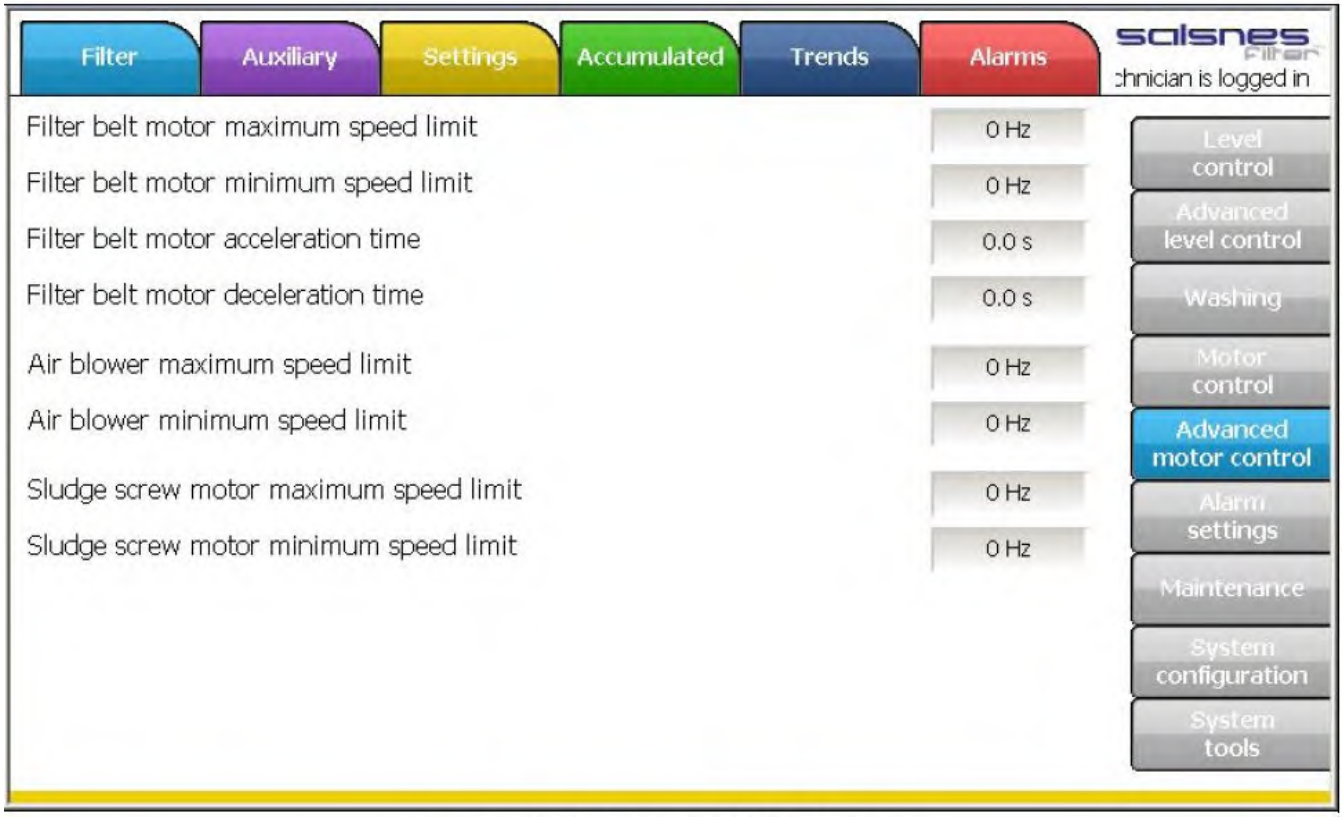


Figure 15 Advanced Motor Control

Alarm Settings

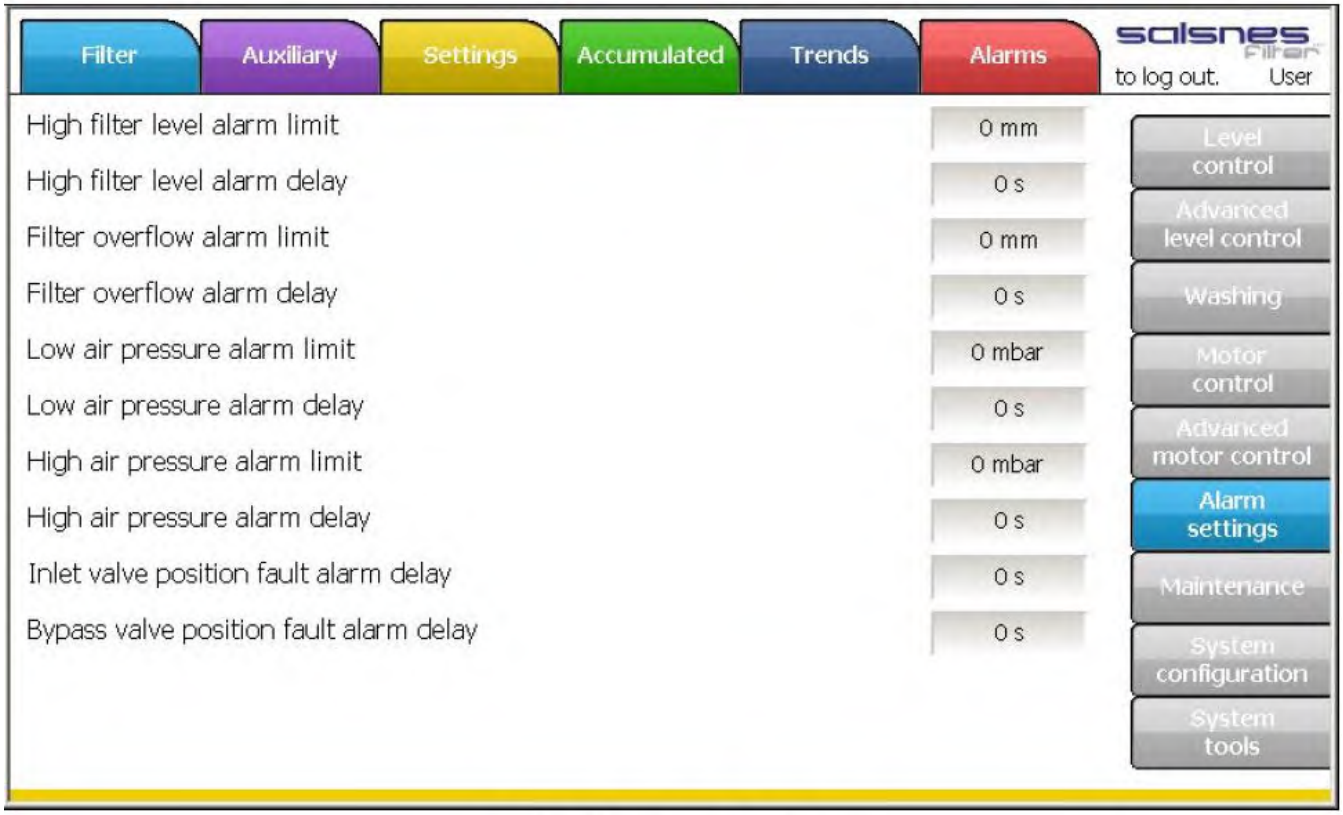


Figure 16 Alarms Settings

Maintenance

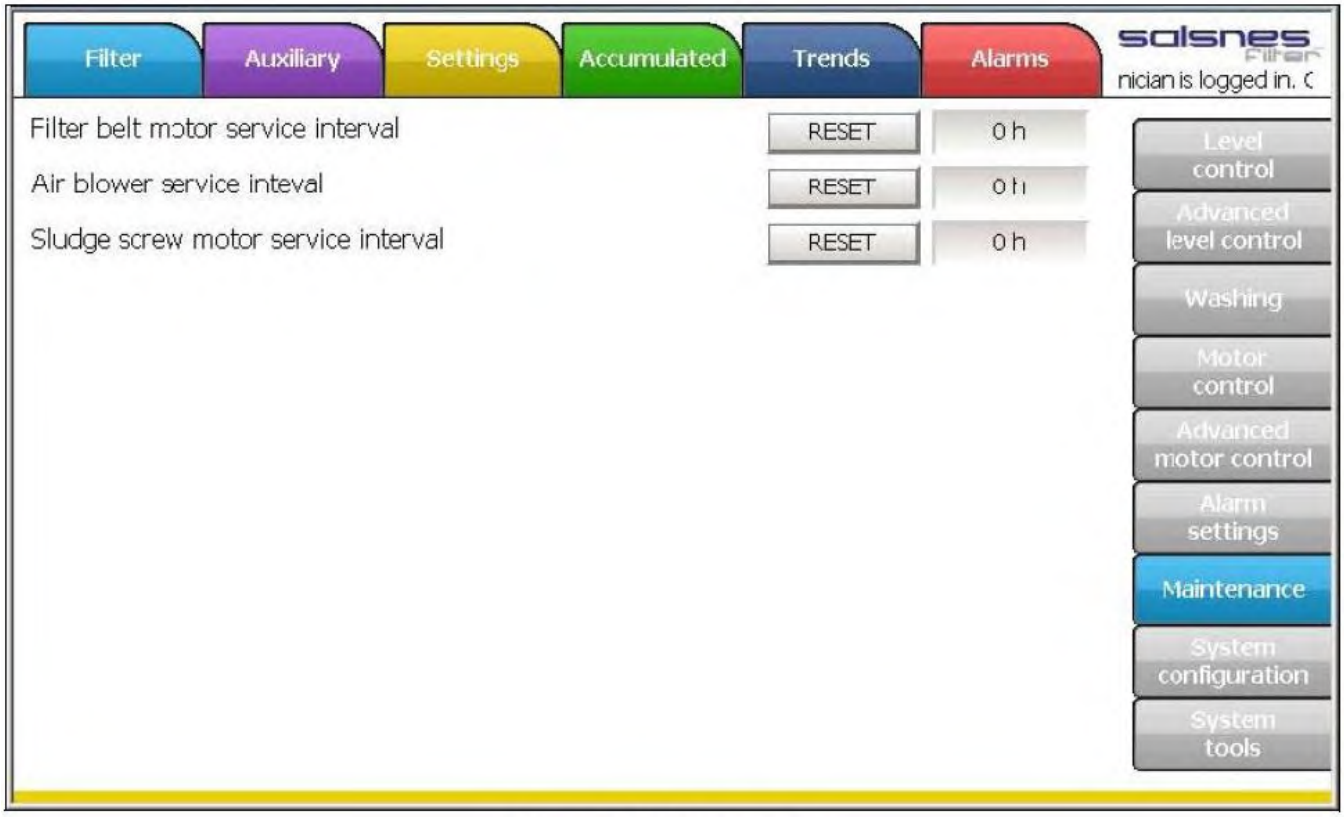


Figure 17 Maintenance

Lower Cost for Providing Recommended Spare Parts

Trojan recommends the spare parts as shown in table below. In order to provide at the lowest cost possible, there will be a guaranteed price as listed with 15% discount off this price if ordered within three years of installation.

Component	Required Quantity	Part Number	Guaranteed Price	Discounted Price
1 Motor for filter mesh/ dewatering unit	1	508072-001 (UL approved)	$970	$834
Blower Filter	1	20102211 for Blower BB52C	$75	$65
Filter Drive Gear Box	1	448041-001	$1,925	$1,656
2 Bearing w/housing, drive roller	1	20006053/20006030	$104	$89
Bearing w/housing, under roller	1	20006054/20006030	$88	$76
Level Sensor Filter Mesh	1	508054-1140	$1,360	$1,170
Guide Roller Seal, 30 x 62 x 10	2	20006102	$12	$21
Guide Roller ball Bearing	2	20006011	$93	$160
Guide Roller Sealing disk	4	20006121	$36	$124
Guide Roller external Circlip	2	20006072	$4	$7

Installed Capital Cost

Compares the actual cost of the equipment as well as footprint size and other factors that affect the total installation cost associated with the equipment. Each piece of equipment is inherently different, and the Supplier shall provide as much information as possible to assist the City of Imperial in determining final installation cost.

TROJAN RESPONSE: Please refer to bidding sheet #2, Microscreen System for capital cost of the Salsnes equipment.

Please refer to the Salsnes SF6000 drawings included with this package for footprint as well as required space required. We've also included on the following pages the installation requirements for the units which should provide significant information to allow one to estimate the installation costs.

Section 5 Installation

⚠ DANGER

Obey all warning and caution statements. Refer to Section 2.

Read and understand the Operation and Maintenance Manual before operating this equipment. Read all user documentation before performing operations, inspections, repair, or maintenance on this equipment.

Only competent personnel should undertake operation, repairs, maintenance, or servicing of equipment described in this section of the manual. If you do not understand the information or procedure explanations in this manual, STOP and contact your Service Technician for assistance.

5.1 Warranty

Installation must be carried out in accordance with the installation procedures in this manual. The representative/distributor will make sure the installation procedures are closely followed.

After the installation is completed and approved, the installation report must be signed. Signed copies of the report will be kept by the customer, the representative/distributor, and the manufacturer. When this is completed it will activate the warranty.

5.2 Work Area

Some installations have service platforms that are the same level as the system lid. Plant safety procedures and protocols must be followed to protect against slipping and falling.

Note: The system requires a designated work area for proper operation. During routine maintenance and servicing, a recommended minimum floor/space area is required.

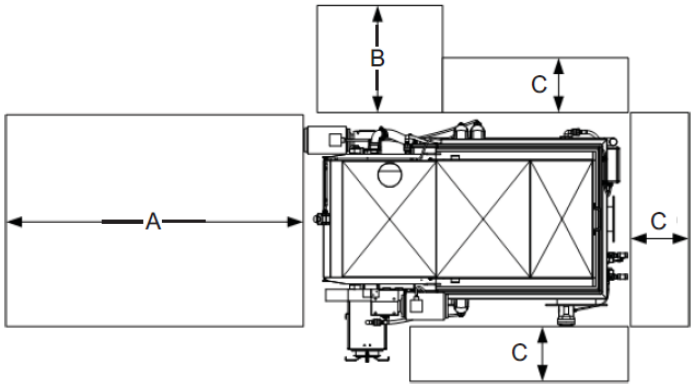


Table 2 Floor space requirements

Salsnes Filters	A	B	C	Vertical Clearance	Foundation Load Bearing Capacity
SF: 1000	1.6 m (5.2 ft)	0.8 m (2.6 ft)	0.8 m (2.6 ft)	1.0m (3.3 ft)	625 kg (1375 lbs)
SF: 2000	2.4 m (7.9 ft)	1.3 m (4.3 ft)		1.0m (3.3 ft)	1,250 kg (2,660 lbs)
SF: 4000	2.8 m (9.2 ft)	1.6 m (5.3 ft)		1.0m (3.3 ft)	1,500 kg (3,300 lbs)
SF: 6000	3.1 m (10.2 ft)	2.0 m (6.6 ft)		1.25 m (4.1 ft)	2,000 kg (4,400 lbs.)

The system must be placed upon a foundation (preferably concrete, steel or aluminum) and the minimum load-bearing capacity as shown in Table 2.

The foundation must be firm and level, strictly adhering to the plant layout drawings.

5.3 Ventilation

The filter system requires a ventilation unit. This will ensure odour and bioaerosols are relocated and prevents overpressure within the system due to pressure generated by the air knife.

Overpressure will cause poor operating conditions resulting in more frequent cleaning and increased aerosols.

Table 3 shows the recommended capacity on the ventilation fan to be connected to the respective system:

Table 3 Recommended Capacity Ventilation Fan

Model	SF: 1000	SF: 2000	SF: 4000	SF: 6000
Capacity ventilation fan	85 m^3/h (144 CFM)	228 m^3/h (135 CFM)	300 m^3/h (178 CFM)	402 m^3/h (238 CFM)
Tube size (Inner/outer diameter)	150/154 mm (5.9/6 in)	150/154 mm (5.9/6 in)	200/204 mm (7.9/8 in)	200/204 mm (7.9/8 in)

If a failure in the ventilation is detected, the system should be immediately stopped. Manufacturer recommends a H2S detector should be installed in the room where the system is operating.

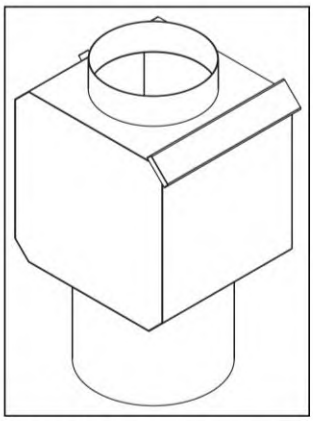


Figure 3 Self Cleaning Ventilation Filter

Optional - Odour control systems can be connected. Typical systems used are photo oxidation systems or biological filters such as bark filters.

5.5.2 External Blower Installation

Blower should preferably be located in a separate room close to the systems to reduce the risk of clogging the air filter due to pollution in the process room. The filter manufacturer recommends that blower be installed in a separate room close to the filter system. For blower installation, see the blower manufacturer product installation instruction manual.

5.5.2.1 Air pipe connection between blower and filter

Use steel piping to connect the blower to the filter air pipe.

Use a flexible coupling at the connection between the blower pipe and the filter air pipe to provide vibration isolation.

Note: *This pipeline can reach a temperature of 80°C (176°F) when filter is in operation.*

The air pipeline must have the following dimensions to avoid pressure loss and reduced performance of the filter:

Table 4 Pipeline Dimensions

Model	Pipeline diameter with pipe length up to 5 m	Pipe line diameter with pipe length above 5 m	Pipe size blower outlet	Pipe size filter air inlet

5.5.2.2 Electrical Connections

Reference project electrical drawings for required electrical connections.

5.6 Water Supply

The Salsnes SF system has an automated and integrated maintenance flushing using cold and hot water.

All water supplies for the flushing system must be of tap water quality to avoid clogging of the spray nozzles in the system. The water pressure should be between 4-6 bar (58-88 psi).

5.6.1 Cold Water Supply

The cold water supply is used for bottom flushing that flushes out fines and silt that sediment at the bottom of the unit.

5.6.2 Hot Water Supply

The hot water supply is used for the automatic maintenance cleaning of the filter mesh and the dewatering cylinder. The supply of hot water can be provided from a water heater with sufficient capacity and temperature.

For proper functionality of the system, hot water temperature should range between 70 °C (160 °F) and 85°C (185 °F) maximum.

Note: *For some applications heat can be a problem (e.g. coagulation of fish protein that clogs the mesh) and cold water can be connected to the hot water intake.*

The hot water usage at 6 bar is shown in Table 5:

Table 5 Hot water Supply

Model	Hot water usage
SF: 1000	8 L/min (2 gal/min)
SF: 2000	16 L/min (4 gal/min)
SF: 4000	21 L/min (5.5 gal/min)
SF: 6000	30 L/min (8 gal/min)

5.6.3 Connection of Water Supply

The connection of the water supplies are done with ½" BSP connections and are located as shown in Figure 5 and Figure 6. Clean up spills immediately to avoid slipping.

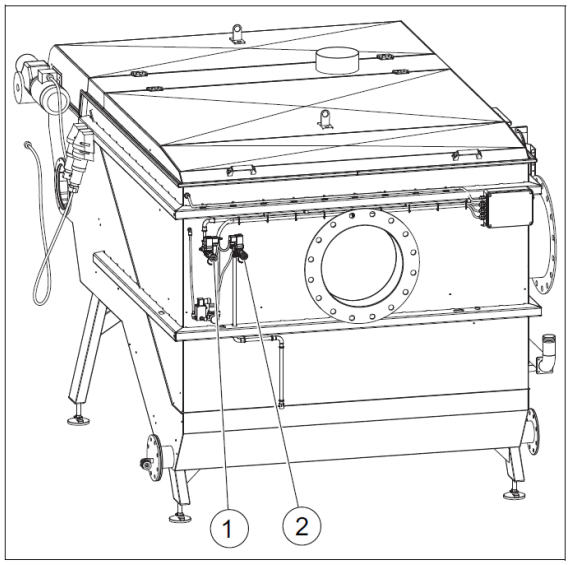


Figure 5 Hot and Cold Water Connections for SF: 2000 - SF: 6000

1	Hot water connection	**2**	Cold water connection

5.7 Wastewater Handling

5.7.1 Wastewater Connections

The wastewater connections for the system are shown below. Default dimensions for the connection flanges are provided in the site specific documentation.

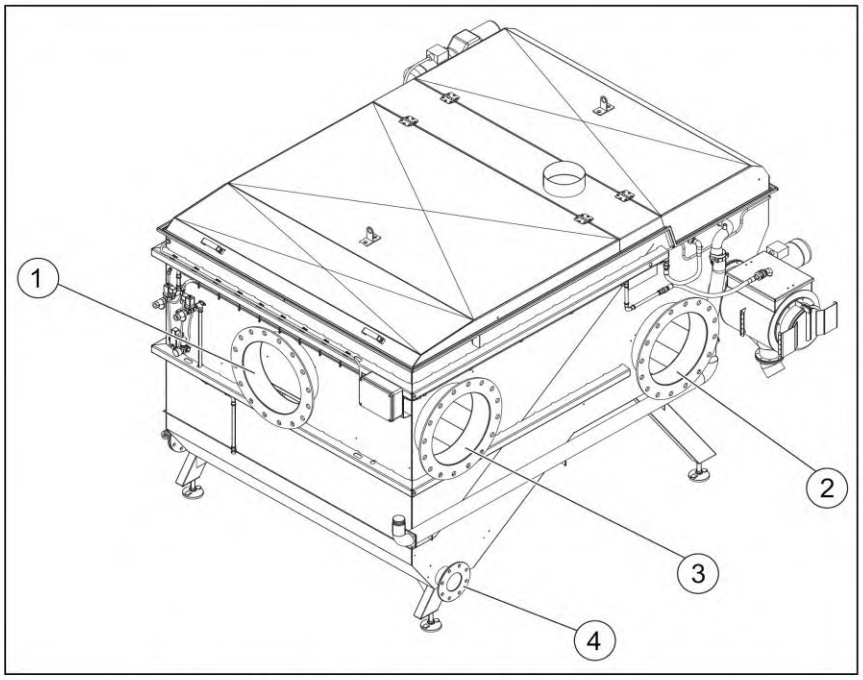


Figure 7 Wastewater Connections for SF: 2000 - SF: 6000

1	Wastewater inlet	**3**	Overflow
2	Filtered water outlet	**4**	Bottom flush connection

**Illustration shown is for representative purposes only. Project specific system may have an alternate configuration.*

5.7.2 Dewatering Unit

If an integrated dewatering unit is used:

1. Provide a sludge collection box \ system under the sludge outlet gate.
2. Connect a 100 mm (4 in.)hose using hose clamps to the reject water pipe on the dewatering unit. Connect other end of hose to the inlet of the filter process.

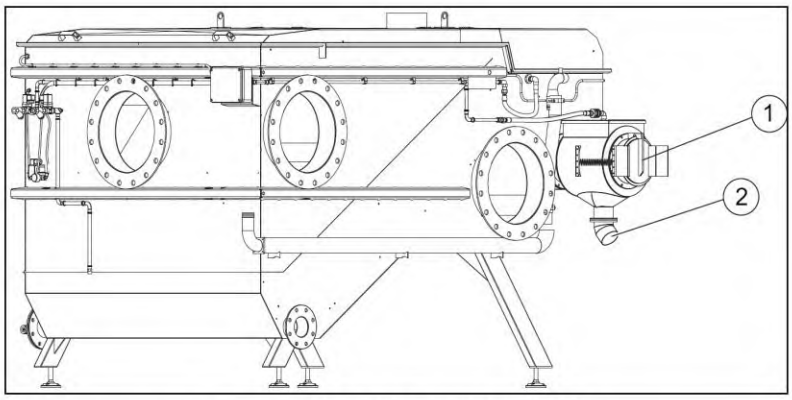


Figure 9 Complete Dewatering Unit

1	Sludge Outlet	**2**	Reject water outlet

5.7.3 Flush Drain Connection

The SF 2000 to SF 6000 come equipped with a flush drain. It is valved and located at the lowest possible location on either side of the unit.

The connection is a Class PN10 4"-100 mm Flange (D.I.N. 2501-Part 1)(ISO7005-1:1992).

5.8 Start-up procedure for the first time

1. Clean blower air pipe by disconnecting the blower pipe at the air knife and running the blower to remove any debris that may be in the pipe.
2. Check that the air pressure is at the recommended level. If the pressure is too low, check the connections. Check the pressure at the panel of the blower or at the Control Power Panel (CPP) display. The pressure should be between 0,3 bar (4 psi) and 0,6 bar (8 psi), preferably around 0,4 bar (6 psi).
3. Check the rotation direction of the belt and the conveyor are correct. Stop the unit if they rotate in wrong direction and switch two of the leads (3 phase connection) on the motor which are connected wrong.
4. Set main switch and flush switches to AUTO position. (Ensure that taps for hot and cold water are open.)
5. Start the inlet flow and open the inlet valve.
6. Open the inlet value approximately half capacity to avoid large quantities of sludge entering the system from sedimentation in tanks or other parts of the external system.
7. Ensure that the dewatering conveyor in the sludge compartment manages to press the sludge out, while a plug of sludge is building up in the dewatering cylinder. A plug can be created by restraining the lid at the end of the dewatering cylinder from opening and/or by adding fibrous material (e.g. newspaper) in the sludge bin.
8. When a normal (dried) sludge mass appears at the dewatering unit, the filter and the screw conveyor are functioning properly.

Experience

TROJAN RESPONSE: Operating from Norway since 1991, Salsnes has focused on perfecting their solids separation filter technology through research, product development, testing, and quality initiatives. This focus and dedication has produced a highly efficient and reliable filter that maximizes solids separation, while dramatically decreasing costs including capital, operating, maintenance and land. With installations around the world and in a variety of municipal and industrial applications, the Salsnes Filter system is synonymous with eco-efficient solids separation technology.

Salsnes currently has over 600 units in operation with over 25 in North America. Following is a reference list for the identical units being proposed for Imperial (SF6000)

SALSNES REFERENCE LIST

PLANT NAME	STATE / PROV	COUNTRY	MODEL	NO. OF UNITS	APPLICATION	CONTACT NAME & TITLE	CONTACT INFORMATION	DELIVERY DATE
DAPHNE	AL	USA	SF6000	2	Municipal	JIM CAUDLE	251-583-5692	2010
HEYBURN	ID	USA	SF6000	1	Municipal	RALPH MARTINI	208-679-9780	2009
PALM VALLEY	AZ	USA	SF6000	1	Municipal	RAY SCOTT	623-298-4825	2011
CLEARWATER	FL	USA	SF6000	2	Municipal	JACK SADOWSKI	727-224-7690	2013
HESSA	ÅLESUND	NORWAY	SF6000	2	Municipal	JOAR STRAND	+47 95 29 07 47	2008
LADYSMITH WWTP	BC	CAN	SF6000	2	Municipal	CURTIS BAKER	250-616-6329	2013
ÅNDALSNES	RAUMA	NORWAY	SF6000	2	Municipal	LEIF GRANDE	+47 71 16 64 17	2010
TREMONTON	UT	USA	SF6000	1	Municipal	JON MILLER	435-257-9472	2010
STANGNES	HARSTAD	NORWAY	SF6000	3	Municipal	VIGGO JOHANNESEN	+47 77 02 68 10	2009
HOLSTNESET	HARSTAD	NORWAY	SF6000	4	Municipal	VIGGO JOHANNESEN	+47 77 02 68 10	2009
FOLEY-RIVIEREA UTILITIES	AL	USA	SF6000	1	Municipal	ROBERT DAVIS	251-923-7790	2008
ASE	ÅLESUND	NORWAY	SF6000	4	Municipal	JOAR STRAND	+47 95 29 07 47	2010

Lead Time

Lead time to receive submittals and lead time for delivery of equipment upon approval of submittals.

TROJAN RESPONSE: Below we have outlined the lead time for the submittals and delivery of the equipment.

DOCUMENTATION (SHOP DRAWINGS AND O & M MANUALS)

Salsnes' Responsibility:

The following documentation will be supplied to the contractor as per the following schedule:

- Submittal shop drawings 4-6 weeks after receipt of written purchase order.
- O&M manuals at time of equipment delivery

DELIVERY, START-UP AND TRAINING

Equipment shipped 16 weeks after approval of Shop Drawings.

The following start-up services will be provided by Salsnes certified technicians:

- Installation assistance as required by phone or fax.
- Inspection and certification of the final installation.
- Four (4) days for functional testing and startup of the Filter equipment. (One Trip)

Warranties

Evaluate the warranty provided and any differences between vendor warranties. Favorable results will be given to suppliers that provide the following:

- **Warranties of extended duration.**
- **Warranties that are not limited by proration.**
- **Warranties that also include service.**
- **Warranties that cover all parts and components of a system.**

TROJAN RESPONSE: On the following page we have outlined the Salsnes Standard warranty. The warranty is 12 months after start-up or 18 months after delivery. This warranty covers all parts and components of the system.

Warranties do not cover service however prior to warranty expiration, Trojan will send to site a factory trained technician to assess the status of the system suggesting items to be serviced. During this one day visit, additional training can be provided at the owner's request.

Salsnes Equipment Limited Warranty

January 23, 2013

The following terms and conditions will govern the equipment warranty provided by Salsnes to the Owner/Operator:

Period of Coverage: Salsnes warrants to the Owner/Operator noted above (the "Customer") that if within 12 calendar months from Substantial Completion (as defined below) or 18 calendar months from the date of delivery, whichever comes first, (the "Warranty Period") equipment manufactured by Salsnes (the "Equipment") will be free from defects in material and workmanship and will function in accordance with the specifications agreed to by Salsnes for the Equipment.

"Substantial Completion" is the date on which the Equipment commissioning and start-up is sufficiently completed such that the Equipment is capable of being put into operation by Owner for its intended use.

This warranty applies only to the Salsnes Filter unit and equipment supplied with and included in the purchase agreement and under the following conditions:

- Salsnes Filter ("SF") shall receive the Startup report signed by customer and representative within 30 days of Equipment Startup.
- Any part of the SF unit that fails or is damaged under normal use within the warranty period will be replaced or, at Salsnes Filter's option repaired.
- Any defective items shall be promptly returned to Trojan/Salsnes.

Technical performance: The Salsnes Technical Reliability and Performance Guarantee apply only under the following conditions:

- The application is as per Salsnes recommendations, and designed in a manner that not allows large or heavy particles, stones, etc. to enter into the SF unit and cause damage.
- The technical performance guarantee is contingent upon proper care and maintenance of the unit as detailed within the Operation and Maintenance Manual, and using Salsnes approved parts.
- Ensuring that appropriate maintenance is completed based on type of influent. This may require, but it is not limited to, utilizing a wash system for removal of Fats, Oil and Grease (above 80 mg/l), manual cleaning of mesh, COG's, equipment, etc.

Limitations: This warranty shall not apply to any failure or defect which results from:

- the Equipment not being operated and maintained in strict accordance with instructions specified in the Operation and Maintenance manual or Product Bulletin or which results from mishandling, misuse, neglect, improper storage, improper operation of the Equipment with other equipment furnished by the Customer or by other third parties or from defects in designs or specifications furnished by or on behalf of the Customer by a person other than Salsnes.
- Equipment that has been altered or repaired after start-up by anyone except: (a) authorized representatives of Salsnes, or (b) Customer acting under specific written instructions from Salsnes.
- Use of parts not supplied or approved by Salsnes.

This warranty does not cover:

- Normal wear and tear of the product
- Consumable components
- Corrosion
- Salsnes supplied components that are the subject of a separate warranty
- Costs related to removal, installation, or troubleshooting of a component
- Physical damage
- Improper installation
- Acts of God, terrorism, biological infestations, or input voltage that create operating conditions beyond the minimum or maximum limits listed in the Operations Manual including high input voltage from generators and lightning strikes
- Damage caused by improper return packaging
- Taxes, duties or brokerage fees (if any)
- Failure or damage caused by the use of the SF unit for any purposes or application other than that intended and communicated to Salsnes at time of sale
- Equipment components manufactured by third parties but furnished to Customer by Salsnes are warranted by the original manufacturer, only to the extent of the original manufacturer's warranty

Owner's Preference

In 2012, Salsnes Filter became a Trojan Technologies company. The Salsnes Filter technology aligns closely with Trojan's municipal business and corporate goal of providing sustainable technologies and smaller footprint solutions – to ensure greater water confidence and environmental stewardship for industries and municipalities around the world.

The Salsnes unit proposed meets all the technical requirements of the spec. The Salsnes unit offers several features to simplify maintenance. Some of these features are:

Installation Base/Experience

Trojan has over 600 Salsnes units currently in operation far and above any competitor. With the 23 years Salsnes has been in existence, many product refinements have been implemented increasing both performance and reliability which can only obtained through experience. Examples include the unique air knife cleaning system, dog tracking resistant cog wheel design, electrical efficiency, and enhanced removal improvements. Due to improved waterless cleaning, dewatering is best in the industry.

Service

Trojan is also locally represented by Coombs Hopkins Company based in Carlsbad California. Trojan and Salsnes stand behind every Salsnes Filter system that we design and manufacture and will continue to support it for the lifetime of the system. Trojan offers a 1-800 number with qualified Technicians available 24-hours / 7 days a week for emergency support. This number is 1-866-388-0488.

Key System Attributes

Quick Connects

You will find only quick connects for water and air connections for fast and easy maintenance.

Access Hatch

Enables quick visual inspections of performance and internal components.

Air Knife

The Air Knife filtermesh cleaning system starts automatically when the mesh begins to rotate. It uses compressed air to clean, which has many benefits compared to scrapers, brushes or water-based cleaning systems. Air is gentler on the mesh (to elongate its life) and on particles (so they don't break into smaller pieces). Air cleaning also keeps sludge drier for more effective dewatering.

Cog Wheel Roller Design

The cog wheel design ensures the belt is kept tight and tracks evenly to prevent uneven wear and reduced belt life.

Filter Cartridge

The design is a continuous loop belt that is removable facilitating serviceability.

GENERAL PROPOSAL INFORMATION

Technical Literature

Technical Literature
Detailed descriptive literature for all equipment being offered must be included with the proposal. Such literature must provide information on electrical wiring needs, space requirements and all technical data required for a full evaluation. Failure to provide technical literature may be cause for rejection of proposal.

TROJAN RESPONSE: Please see below for SF6000 Specifications, Scope of supply including electrical requirements, and product drawing detailing space requirements. Also provided is the Salsnes brochure.

SF6000 Specifications:

SF: 6000	
General	
Environment ambient Temperature	0°C - 40°C (32°F - 104°F)
Filter Frame Dry Weight	750 kg (1654 lbs)
Air Knife	
Air Knife Pressure	0.32 bar (max 0.65 bar) / 4.64 psi (max 9.43 psi)
Filter	
Water Supply Requirements	Tap Water Quality, 4-6 bar pressure (58-88 psi)
Bottom Drain Flushing Frequency	3 minutes every 24 hours (field adjustable from 1 - 60 minutes between 1 - 24 hours)
Grease	SKF LGWA 2 According to DIN 51825, code KP2N-30 (lithium based)
Level Sensor	
Start Level	165 mm (6.5 in)
Stop Level	155 mm (4.9 in)
Overflow Level	345 mm (13.6 in)
Control Power Panel	
Panel Temperature Limit	40 °C (104°F)
Electrical	480/277V 3 ph, 3 wire + gnd, 60 Hz 400/230V 3 ph, 3 wire + gnd, 50 Hz
Peak Power for filter unit	16.6 kVA
Certification	
All Models	CE and UL available

salsnes Filter

SCOPE OF SUPPLY FOR WASTEWATER TREATMENT PLANT
WASTEWATER FILTRATION SYSTEM – ROTATING BELT FILTER SYSTEM

Unless otherwise indicated in this proposal all conduit, conductors, local disconnects and transformers (if required) are the responsibility of the CONTRACTOR and are not included in this Scope of Supply.

FILTER UNIT

Salsnes' Responsibility:
Each Filter Unit will contain one (1) rotating filter belt, Air Knife belt cleaning system, hot water spray system, fresh water flush system, water level transmitter, and integrated sludge collection and dewatering screw press. Electrical drive motors will be UL approved for a category Class 1 Div 1 hazardous location. Filter instrumentation and solenoid valves shall be either intrinsically safe or UL approved for a category Class 1 Div 1 hazardous location.

Model and Make:	Salsnes Filter belt filter (SF6000)
Quantity:	1 (One)
Material of Construction:	Filter box –316L stainless steel Integrated sludge de-watering: • Screw – carbon steel • Trough/lid – 316L stainless steel
Mesh size:	350 microns
Inlet Flange Size:	16" Class 150 ANSI Bolt Pattern
Outlet Flange Size:	16" Class 150 ANSI Bolt Pattern
Overflow Flange Size:	16" Class 150 ANSI Bolt Pattern
Ventilation System Connection:	8" Plain Pipe
Bottom Drain Connection:	4" Lug Style Valve - Class 150 ANSI Bolt Pattern
Filter Weight (Approx.):	4268 lbs. (1940kg) with water

Installation Contractor's Responsibility:
The Installation Contractor shall be responsible for installation and support of the Filters within the process piping as indicated on the drawings. The Filter shall be installed with to allow isolating and draining the Filter box for servicing. The Installation Contractor shall be responsible for setting the unit in place. The Installation Contractor shall be responsible for the supply, installation and connection of the following at each Filter Unit:

1. Two (2) 480 Volt, 3 phase, 3 wire (plus ground), 60 Hz 1.8 kVA power feed *from CP to the Filter junction box* for the filter belt motor and dewater auger motor. Single conduit connection provided at Filter.
2. Three (3) 24 Volt DC, 2 wire *from the CP to the Filter junction box* for cold water flush solenoid, hot water flush solenoid, and cold water drain knife valve solenoid
3. One (1) shielded twisted pair *from the CP to the Filter E-Stop push button terminal box*.
4. Two (2) analog signals, each consisting of one (1) shielded twisted pair *from CP to the Filter junction box* for hydrostatic level sensor and air pressure sensor
5. Connect hot and cold water lines at the Filter - 1/2" NPT connections on Filter
6. Connection of 4" rigid air pipe (supplied by others) *from the Filter to the Blower*
7. Bonding wire (ground) from filter unit to CP
8. Installation of ventilation filter (as required)

Associated Equipment to be supplied and installed by others:
- Downstream and upstream isolation valves (as required)
- All pipe spools, elbows, reducers, pipe supports, thrust supports etc.
- Lift device for mesh removal/servicing
- Hot/cold water supply - 60-90 psi
- Ventilation system for odor control and removal of contaminants
- Flowmeter (optional)
- Pressure washer system

Hardware required for installation and mounting are the responsibility of the Installation Contractor. Unless otherwise noted, all ancillary equipment (valves, flowmeters, etc) are the responsibility of the Installation Contractor.

BLOWER ASSEMBLY

Salsnes' Responsibility:
A positive displacement rotary lobe blower with sound attenuation enclosure shall be supplied to operate the Air Knife belt cleaning device. Blower to be installed indoors in a location outside the Classifed Area.

Quantity Supplied	1 (One) blowers will be supplied
Model:	Kaeser BB69C
Rated Power:	10 HP
Weight:	642lbs (291 kg) each (with sound enclosure)

Installation Contractor's Responsibility:
The Installation Contractor to be responsible for the installation of each Blower as indicated on the drawings. The Installation Contractor to be responsible for the supply, installation and connection of the following at *each Blower*:

1. One (1) 480 Volt, 3 phase, 3 wire (plus ground), 60 Hz, 14.7 kVA power feed *from CP to Blower*.

CONTROL PANEL (CP)

Salsnes' Responsibility:
One Control Power Panel (CPP) shall be supplied to distribute power, monitor and control each Filter unit. The CPP will be UL approved. Maximum Filter to Control Panel separation distance (as measured along the wire route) is 115 feet (35 meters)

Quantity Supplied	1 (One) Control Panels (CP) will be supplied
Location:	Wall mounted
Controller Type:	Allen Bradley Compact Logix L16
Operator Interface:	Beijer 7"
Material of Construction:	304 Stainless Steel
Enclosure Rating:	Type 4x (IP65)
Panel Weight:	214 lbs. (97 kg)
Variable Frequency Drive:	Allen Bradley Powerflex

Installation Contractor's Responsibility:
The Installation Contractor to be responsible for the installation of the CP(s) as indicated on the drawings. The Installation Contractor to be responsible for the supply, installation and connection of the following at *each Control Panel*:

1. One (1) 480 Volt, 3 phase, 3 wire (plus ground), 60 Hz, 14.7 kVA power feed with local disconnect *to each Control Panel (CP)*
2. Two (2) 480 Volt, 3 phase, 3 wire (plus ground), 60 Hz 1.8 kVA power feed *from CP to the Filter junction box* for the filter belt motor and dewater auger motor. Single conduit connection provided at Filter.
3. Three (3) 24 Volt DC, 2 wire *from the CP to the Filter junction box* for cold water flush solenoid, hot water flush solenoid, and cold water drain knife valve solenoid
4. One (1) shielded twisted pair *from CP to the Filter E-Stop push button terminal box*.
5. Two (2) analog signal consisting of one (1) shielded twisted pair *from CP to the Filter junction box* for hydrostatic level sensor and air pressure sensor
6. Bonding wire (ground) *from filter unit to CP*
7. One (1) analog signal consisting of one (1) shielded twisted pair *from the flow meter to the CP* (if applicable)
8. Two (2) 24 Volt DC, 2 wire *from the plant DCS to the CP* for Run Permissive and Remote Fault Reset signals (if applicable)
9. Two (2) 24 Volt DC, 2 wire *from the CP to the plant DCS* for System Operating and Fault Status signals (if applicable)

Unless otherwise noted, all conductors, conduit and local disconnects are the responsibility of the CONTRACTOR.
The CPP does not provide power to any plant system valves (if present).

WATER HEATER

Salsnes' Responsibility:
A Tankless Water Hheater will be supplied to provide hot water for the FOG cleaning cycle. Water Heater to be installed indoors in a location outside the Classifed Area. All service lines (Water, fuel, exhaust) to be supplied and installed by others.

Quantity Supplied	1 (One) Water Heater will be supplied
Model:	Takagi Mobius T-M50

SPARE PARTS AND SAFETY EQUIPMENT

Salsnes' Responsibility:
The following spare parts and safety equipment will be supplied with the system:

1 (One) SF6000 350um mesh

NOTES AND CLARIFICATIONS TO SPECIFICATION

1. **Exhibit 1 - G-24** - Salsnes Equipment has not been design for compliance with nor reviewed against the requirements of the California Building Code. If this review/calculations are required, or equipment modifications are required, these will be outside the scope of this proposal.
2. **Bid Item #2 - 1.3.C** - The vast majority of the filter unit will be manufactured from 316L SS. However there are numerous components in the filter unit which are not including air knife, filter mesh, Valve body, seals, hoses and tubing. Additionally control panels and blowers are not made entirely of stainless steel, however are made from material suitable for the environment/application.
3. **Bid Item #2 - 1.3.D** - All components on the Filter Unit assembly will meet this requirement. The Blower, Control Panel, and any other ancillary equipment will not be Class 1 Div 1, and are to be installed outside of the classified area.
4. **Bid Item #2 - 2.3.A.4.f** - 3" plain pipe connection will be provided for blower air, 8" plain pipe connection will be provided for exhaust air
5. **Bid Item #2 - 3.3.B –** Please note that the start-up requirements detailed in paragraph 3.3.B conflict with requirements of paragraph G-05.C.3 & G-20. This proposal is based on the requirements of paragraph 3.3.B only. If additional service time is required, this time will be handled outside to scope of this proposal

DOCUMENTATION (SHOP DRAWINGS AND O & M MANUALS)

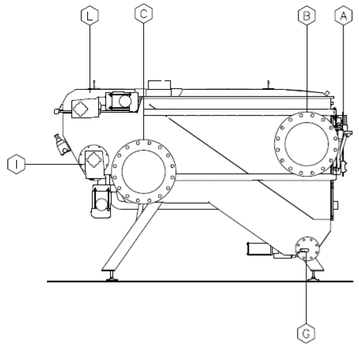
Salsnes' Responsibility:
The following documentation will be supplied to the contractor as per the following schedule:
Submittal shop drawings 4-6 weeks after receipt of written purchase order.
O&M manuals at time of equipment delivery

DELIVERY, START-UP AND TRAINING

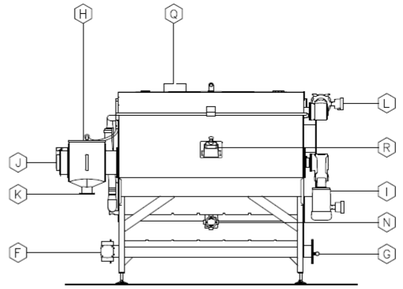
Equipment shipped 16 weeks after approval of Shop Drawings.

The following start-up services will be provided by Salsnes certified technicians:

- Installation assistance as required by phone or fax.
- Inspection and certification of the final installation.
- Four (4) days for functional testing and startup of the Filter equipment. (One Trip)



LEFT SIDE VIEW
SCALE: NOT TO SCALE



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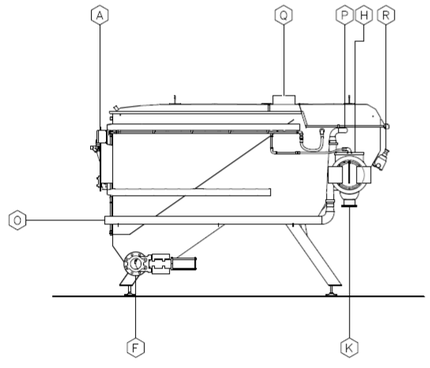

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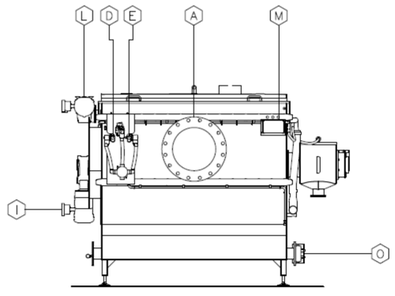


FRONT VIEW / INLET
SCALE: NOT TO SCALE

EQUIPMENT LIST

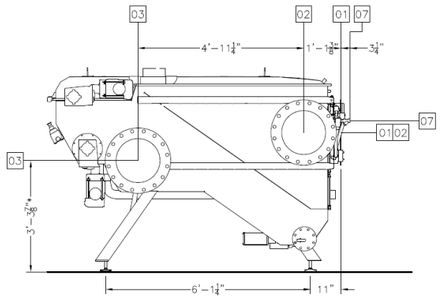
No.	DESCRIPTION	No.	DESCRIPTION
A	INLET FLANGE	J	DEWATERED SLUDGE OUTLET
B	OVERFLOW FLANGE	K	REJECT WATER CONNECTION
C	OUTLET FLANGE	L	FILTER MESH MOTOR & GEARBOX
D	HOT WATER CONNECTION VALVE	M	ELECTRICAL CONNECTION BOX
E	COLD WATER CONNECTION VALVE	N	MOTOR CONNECTION BOX
F	KNIFE GATE VALVE	O	BLOWER CONNECTION PIPE
G	BOTTOM FLUSH SPRAY BAR	P	AIR KNIFE
H	DEWATER UNIT (OPTIONAL)	Q	VENT (OPTIONAL) – SEE NOTES
I	AUGER MOTOR & GEARBOX	R	E-STOP

NOTES:
: FILTER ENCLOSURE MATERIAL TO BE 316L STAINLESS STEEL.
: ANCHOR BOLTS ARE NOT SUPPLIED BY SALSNES FILTER.
: SYSTEM CONDUIT, WIRING, DISTRIBUTION PANELS & INTERCONNECTIONS BY OTHERS.
: FILTER UNIT TO BE POSITIONED ON A FOUNDATION (CONCRETE, STEEL OR ALUMINUM)
: FOUNDATION FLOOR MUST BE FIRM AND LEVEL.
: MAXIMUM CABLE DISTANCE TO CONTROL POWER PANEL (CPP) (NOT SHOWN) IS 260'.
: ELECTRICAL REQUIREMENTS SHOWN ARE TO SUPPLY SALSNES FILTER EQUIPMENT ONLY. ELECTRICAL INRUSH FACTOR TO BE ADDED AS PER LOCAL CODE.
: CONTRACTOR TO REVIEW ALL SALSNES FILTER INSTALLATION INSTRUCTIONS PRIOR TO EQUIPMENT INSTALLATION.
: **WHEN THE OPTIONAL ONBOARD FILTER VENT IS USED, THE CONTRACTOR MUST PROVIDE FLEXIBLE OR REMOVABLE PIPING TO ALLOW FOR FILTER MAINTENANCE.**

DESCRIPTION: STD. SALSNES FILTER SF6000 LEFT OUTLET OVERFLOW, RIGHT SLUDGE OUTLET (UL EX)

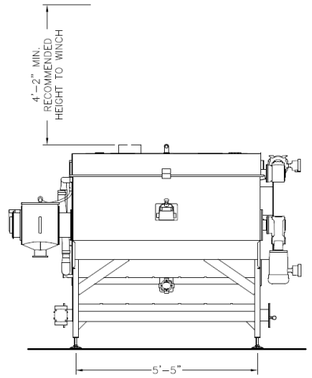
DRAWN BY :	SAH	DATE :	14JA12
CHECKED BY :	MW	DATE :	14JA16
APPROVED BY :	DP	DATE :	14JA16
SCALE (11x17) :	NOT TO SCALE	LOG NUMBER :	N/A

STD. DRAWING NO. SF0026
REFERENCE NO. N/A
DWG NO. D01
REV. A



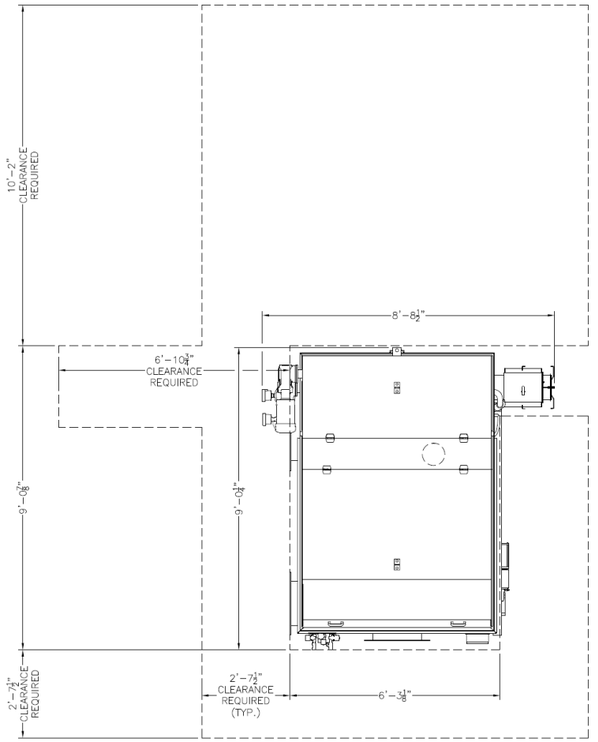
LEFT SIDE VIEW

SCALE: NOT TO SCALE



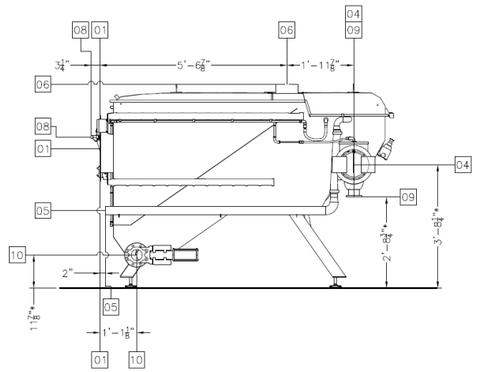
END VIEW

SCALE: NOT TO SCALE



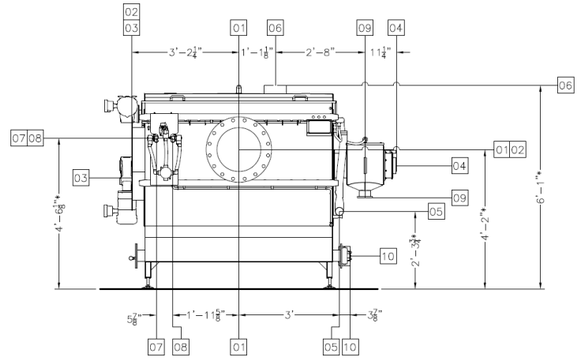
PLAN VIEW

SCALE: NOT TO SCALE.



RIGHT SIDE VIEW

SCALE: NOT TO SCALE



FRONT VIEW / INLET

SCALE: NOT TO SCALE

TERMINATION POINTS			
TP#	SIZE	CONNECTION	FUNCTION
01	10" (16")	150# FLG FF	INFLUENT
02	16"	150# FLG FF	OVERFLOW
03	16"	150# FLG FF	DRAIN/EFFLUENT OUTLET
04	N/A	FREE DISCHARGE	SOLIDS WASTE
05	3"	PLAIN PIPE	BLOWER
06	8"	PLAIN PIPE	VENT (EXHAUST) (OPTIONAL)
07	1/2"	FNPT	SERVICE WATER (HOT)
08	1/2"	FNPT	SERVICE WATER (COOL)
09	4"	PLAIN PIPE	REJECT WATER (DEWATER) (OPT.)
10	4"	150# LUG VALVE	WASTE (SLUDGE)

NOTES:

: * DIMENSIONS SPECIFIED ARE ± 2" DUE TO ADJUSTABLE FILTER LEG.
: FILTER ENCLOSURE MATERIAL TO BE 316L STAINLESS STEEL.
: ANCHOR BOLTS ARE NOT SUPPLIED BY SALSNES FILTER.
: SYSTEM CONDUIT, WIRING, DISTRIBUTION PANELS & INTERCONNECTIONS BY OTHERS.
: FILTER UNIT TO BE POSITIONED ON A FOUNDATION (CONCRETE, STEEL OR ALUMINUM)
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: CONTRACTOR TO REVIEW ALL SALSNES FILTER INSTALLATION INSTRUCTIONS PRIOR TO EQUIPMENT INSTALLATION.

DESCRIPTION: STD, SALSNES FILTER SF6000
LEFT OUTLET OVERFLOW, RIGHT SLUDGE OUTLET (UL EX)

DRAWN BY : SAH	DATE : 14JA12	
CHECKED BY : MVW	DATE : 14JA16	
APPROVED BY : DP	DATE : 14JA16	
SCALE (11x17) : NOT TO SCALE	LOG NUMBER : N/A	

STD. DRAWING NO. SF0026
REFERENCE NO. N/A
DWG NO. D02
REV. A

Attachment D

Mitcherson Ecosieve

Microscreen Bid

Mitcherson LLC
109 East 17th St Suite 63
Cheyenne, WY 82001
(877) 937-0330
www.mitcherson.com

Goble Sampson Associates Inc.
3500 So. Main St Suite 200
Salt Lake City, UT 84115
(801) 268-8790
www.goblesampson.com

November 24, 2014

City of Imperial
c/o Albert A. Webb Associates
3788 McCray St.
Riverside, CA 92506
Brian.knoll@webbassociates.com

Attn: Brian Knoll
RE: Furnish Equipment for the City of Imperial WWTP Headworks Project

Dear Mr. Knoll

Our proposal for the City of Imperial Bid #2 Microscreen System is attached. Mitcherson recommends an EcoSieve treatment approach for minimal capital and operating costs, operational simplicity, and high system reliability. The proposed American made EcoSieve equipment incorporates a water based cleaning system which will save the City of Imperial energy for many years of operation versus a blower package.

Mitcherson strives to bring the highest quality products to the market at the lowest cost. Mitcherson brings years of experience combined with a passion for engineering excellence to produce the best screening equipment ever offered. We believe our proposed treatment approach represents a low cost and low risk approach for the City of Imperial.

We are eager to provide any additional information you require on our wastewater experience and, in particular, this proposed wastewater treatment plant.

Sincerely,

Michael Anderson
EcoSieve Wastewater Treatment Systems
Mitcherson LLC
(951) 786-8361
manderson@mitcherson.com

Proposal To

City of Imperial
c/o Albert A. Webb Associates

To Furnish Equipment for the City of Imperial WWTP Headworks Project

To Treat Wastewater At the intersection of East 15th Street and North N Street in the City of Imperial, CA 92251.

Submitted By

Mitcherson LLC
109 East 17th St Suite 63
Cheyenne, WY 82001
(877) 937-0330
www.mitcherson.com

Goble Sampson Associates Inc.
3500 So. Main St Suite 200
Salt Lake City, UT 84115
(801) 268-8790
www.goblesampson.com

November 24, 2014

109 East 17th St Suite 63
Cheyenne, WY 82001
Phone/Fax: (877) 937-0330
email: sales@mitcherson.com

Disclosure Statement

This proposal has been prepared for the purpose of presenting Mitcherson EcoSieve wastewater treatment system to the City of Imperial and its appointed designees (collectively the “recipients”).

The contents of this proposal and drawings and attachments thereto contain proprietary and confidential information that is being presented to recipients for their sole benefit and as a means to further enable the recipients to independently evaluate the information contained herein and arrive at an objective decision as to the technical and economic merits of Mitcherson’s proposed treatment system. Disclosure of the Confidential Information to recipients shall not be construed in any way as granting to recipients any rights in the Confidential Information.

Contents of this proposal are not be used in any manner that would be detrimental to Mitcherson’s interests, and it is not to be reproduced in whole or part other than for the purpose intended and the contents are not to be knowingly reproduced and transmitted to any party that is not directly involved with evaluating the merits of this proposal.

The recipients will take all reasonable precautions and steps to ensure that the contents of this proposal are maintained in recipients’ confidence. This proposal and all copies thereof are to be returned to Mitcherson upon request.

109 East 17th St Suite 63
Cheyenne, WY 82001
Phone/Fax: (877) 937-0330
email: sales@mitcherson.com

Table of Contents

MITCHERSON
PROVIDING SOLUTIONS FOR A BETTER FUTURE
109 East 17th St Suite 63
Cheyenne, WY 82001
Phone/Fax: (877) 937-0330
email: sales@mitcherson.com

GOBLE SAMPSON ASSOCIATES INC.

City of Imperial
420 South Imperial Avenue
Imperial, CA 92251

Nov 24, 2014

Our Quotation Number: 2000-141112
Ref: **Furnish Equipment for the City of Imperial WWTP Headworks Project**

It is our pleasure to submit the following proposal for an American made machine for your consideration:

Model	Description	Unit Cost	Quantity	Ext Price
ES-3600	EcoSieve	$206,979	1	$206,979.00
MTL-ADD	TYP 316L SS Metallurgy Upgrade	$16,700	1	$16,700.00
EC-0001	Upgraded Controls	$10,700	1	$10,700.00
HW-0001	F.O.G. Hot Water System	$4,600	1	$4,600.00
SB-0001	Dewatering Self Bagging System and Custom Stainless Steel Chute	$4,350	1	$4,350.00
FB-3600	Filter Belt for ES-3600 – 350 micron	$2,275	3	$6,825.00
SU-0001	Start Up Service	$920	4	$3,680.00
			Total:	**$253,834.00**

Total Price FOB our facility $253,834.00

Estimated Freight to Imperial, CA: $5,200
Estimated Lead Time is 14 weeks from “Notice to Proceed” on Mitcherson shop drawings.
Payment Schedule
5% Shop Drawings
70% Delivery of All Equipment to the Project Site
10% Submission of Installation Certificate to the City of Imperial
10% Successful Equipment Start-Up, Test, and Training
5% Final Payment (35 days after the City of Imperial files Notice of Completion)
All invoices are due NET 30 days. Payments received after 30 days will be subject to 2% monthly interest charge

Scope of Supply

ES-3600: The EcoSieve is a high flow high efficiency filtration device that both separates suspended solids and also collects and dewaters solids all in one compact unit. These units are American made and are equipped with electric motors for auger, belt and cage drives that are all wired to a common junction box. Units are inclusive of required basic instrumentation and associated wiring. Plumbing for wash systems and booster pumps are also included. Wash system require a clean water supply (flow requirements are determined on attached Mitcherson data sheet). Wash systems are capable of being operated from the effluent stream of the EcoSieve when 300 micron or less filter belts are installed, on the outlet of the EcoSieve however best results will be achieved from the cleanest water supply possible. If customer elects to provide a clean wash water supply, all EcoSieves will have an external connections for wash water connection that may be used in lieu of the effluent connection. All EcoSieves come with a basic control system mounted directly to the filter housing. This control system provides the minimum amount of equipment to run our system effectively.

A. EcoSieve Unit General
    1. The unit will be freestanding, designed for installation on a concrete floor/pad.
    2. Unit weight, including water, will not exceed 13,850 lbs. (6,282 kg).
    3. Unit will contain two (2) rotating filter belts, hot water spray system including hot water heater, fresh water spray system, water level transmitter, and integrated sludge collection and dewatering screw press.
    4. The unit shall be supplied with the following connections:
        a. Two 12” inlet flanges
        b. One 16” outlet flange
        c. One 16” overflow flange
        d. One 1” NPT connection for cold water and one 1” NPT connection for hot water
        e. One 4” (100 mm) flanged connection for sump drain.
    5. The EcoSieve and all welded metal components in contact with effluent shall be constructed of 316L stainless steel.
B. EcoSieve Unit Internals
    1. The filter belts will be contained in the filter compartments. The filter mesh screens will be constructed of polyethylene with Kevlar-reinforced drive ends. The mesh screen porosity (opening size) will be 350 microns.
    2. A level transmitter for monitoring the water level in the influent compartment will be provided. The level transmitter will be specifically designed for use in wastewater and pump/lift applications. Level transmitter will utilize a ceramic sensing element resistant to sludge build up, ASTM A-316L stainless steel housing, and a vented polyurethane insulated cable.
    3. Filter Mesh cleaning is to be performed by pressurized water. Air cleaning consumes excessive electricity and does not produce a drier sludge on an effective auger (solids are already wet!). Air will not reduce sludge dewatering and disposal costs.
    4. Hot water spray nozzles will be provided for cleaning of filter belt and wedge wire screen in dewatering chamber. Spray nozzles and manifolds will be

constructed of stainless steel. A 2-way solenoid valve will be provided for automated control. Manifolds for hot water supply connection will combine and terminate on external piping on the exterior of the filter compartment.

5. All internal Filter components will be installed by the manufacturer prior to the EcoSieve unit being shipped to the job site.

C. EcoSieve Unit Fittings
   1. Flange drilling and bolting for all flange connections will be in accordance with ANSI/ASME B-16.5 class 150 straddling the horizontal and vertical centerlines.
   2. All threaded connectors to the EcoSieve(s) will be NPT (North America).

D. System Piping and Ducting
   1. All Filter System piping shall be ASTM A-316L stainless steel.

EcoSieve Routine maintenance:

The EcoSieve routine maintenance consist primarily of routine daily inspections to ensure that all automated cleaning systems are functioning properly and no fouling has occurred. Lids are equipped with inspection windows that adhere to the guidelines provided by OSHA that allows routine inspections without stopping equipment or removing machine guards. Additional sensors on the equipment will also detect abnormal operation in the PLC and notify the operator of abnormalities. Access covers are provided above and below the filter conveyor to allow complete inspection and cleaning without disassembly or removal of the conveyor. In the event that a filter belt needs to be replaced, the filter conveyor must be removed. Retractable lids allow removal without disassembly of lids. Each conveyor is equipped with a lift arm that allows for the conveyors to be removed with a single lift hook. An overhead trolley with a hoist rated for 1 TON is recommended for easy removal of a belt conveyor. With proper lifting tools, a conveyor can be removed in minutes and a complete belt replacement can be performed in less than 2 hours since the belt can be removed while the lift rigging remains in place. Bearings are anticipated to last for years, therefore the only recommended spare parts are filter belts. Bearings are pre-lubricated and do not require to be re-greased. Nylon brushes used to clean the dewatering cage shall be replaced every three to six months. Initial Eco-Sieve will be supplied with (1) spare set of nylon brushes. Additional sets can be purchased for $225 each.

EC-0001: Upgraded Control Panel

1. The EcoSieve system operation will be controlled from Mitcherson supplied Control Panel. All equipment controllers, motor starters, drives, etc. will be housed within this panel.
2. The Mitcherson Control Panel will each include the following:
   a) Human Machine Interface (HMI): Beijer T7A shall be supplied.
   b) Programmable Logic Controller (PLC): Allen-Bradley CompactLogix shall be supplied.
   c) Belt Filter and Dewatering Screw Variable Frequency Drives (VFD): AB Powerflex.
   d) Other starters, as required, for automatic operation of the EcoSieve.

e) The HMI will be located at the front enclosure door. The panel will have an unfused main disconnect operated from a handle on the front of the panel.
f) Control Panel will include a fiber optic Ethernet switch for communications to the plant SCADA system. Control Panel will be shipped pre-assembled and pre-tested for field wire connections.
g) The Filter System controls will be completely self-contained and capable of automatic operation. All system control parameters will be accessible at the HMI.
h) The filter belt speed will be regulated by a level transmitter located in the inlet compartment. The PLC will automatically control the filter belt speed based on the water level in the inlet compartment.
i) The dewatering screw speed is manually set at the HMI. Sludge conveyor screw will be one-speed (with On/Off control) and will operate when the filter belt is rotating (integrated dewatering only).
j) Hot water spray will be controlled via operator adjustable frequency and duration timers at the HMI.
k) Fresh water flush will be controlled via operator adjustable frequency and duration timers at the HMI.

HW-0001: Hot Water Supply for FOG Cleaning

1. Mitcherson shall identify any water quality parameters required by the hot water system.
2. Hot Water Heater shall be supplied by Mitcherson and shall supply hot water at least 160°F (70°C) and will not exceed 195°F (90°C).
3. Mitcherson to provide a Rheem model G100-200 100 gallon commercial water heater.
4. Frequency of hot water flush operation will be field-adjustable through the HMI.

SB-0001: Dewatering system shall include a stainless steel discharge chute and a self-bagging unit. Self-bagging is designed for easy filling of full open and duffel top bags with lift loops. The bag loops are fed onto the holder arms for filling. Full bag is removed by lifting the pallet. The frame is adjustable for bags from 44” to 60” tall. Easily transported via fork pocket base. Construction is heavy gauge structural steel coated with enamel paint. This device can easily fill up to a two metric ton (4,400 lb.) bulk bag.

FB-3600: Mitcherson fabricated belts are high quality endless filter belts that are custom made to fit our EcoSieve products. The filter belt will be contained in the filter compartment. The filter mesh screen will be constructed of polyethylene with Kevlar-reinforced drive ends. The mesh screen porosity (opening size) will be 350 microns.

SU-0001: This service will consist of one trip with four (4) x eight (8) hour days allocated. The training program is estimated to be 8 hours in duration. If additional or follow up training is desired by the WWTP it will be invoiced per Mitcherson rates.

About Mitcherson LLC

Mitcherson LLC is an innovative new company founded in October 2013 by Chris Mitchell and Michael Anderson. Mitcherson brings a combined screening and waste water treatment experience of over ten years, working with top treatment companies. After several years of working with screening companies, Michael and Chris came to a conclusion that the existing screening technologies were overpriced and underperformed what the industry truly needs to make this technology a viable option for the future. It became Mitcherson's mission statement to bring to market an affordable quality choice for primary treatment. Chris Mitchell is a licensed professional engineer in multiple states including Texas and California. He has a mechanical engineering degree from University of Texas at Austin. He has over 16 years of experience from the oil and gas industry and water and wastewater industry. Chris's expertise is in mechanical machinery design. Michael Anderson is an industry leader in high quality control systems. He has over 23 years of experience from the water and wastewater industry. Michael's expertise is with control engineering including over 50 water treatment installation start-ups. Their combined experience and industry knowhow creates the foundation for the Mitcherson EcoSieve product design and manufacturing advantage. It should be noted that because Mitcherson is a relatively new company, there are currently no permanent installations of Mitcherson equipment except for our mobile equipment demonstration unit, therefore references are personal references for the founders of Mitcherson and do not represent existing firm customers.

If awarded this project, the Contract Manager for this project will be Michael Anderson. The alternate contract manager for this project will be Chris Mitchell.

Demonstration Program

Our filter sizing is based on medium strength Total Suspended Solids (TSS) loadings. It should be understood that different characteristics of TSS can have drastic effects on how solids are screened from a waste stream and at what rate the TSS will block the filter media. The rate at which the filter media blocks the filter media will have a direct correlation to the volume capacities that the filter will be able to process. Knowing the concentration of TSS is important to sizing equipment but often the type of solids can have just as much effect on the filtration characteristics. Mitcherson does not provide any process guarantees for our equipment, including what impact our screening will have on other downstream process equipment or guarantees on what the actual filtering capacities or removal rates will be for your application. Mitcherson recommends that all applications should have a pilot test performed to accurately predict our filtration process flow capacities and efficiencies so that we can best size the equipment for your application and needs. Mitcherson is currently offering demonstration services to the lower 48 continental United States. The demo pricing includes mobilization cost to bring our mobile unit to your site, set-up of the mobile unit, on-site operation of our mobile unit 5 days per week at 8 hours per day. Set-up includes us supplying our own pumping equipment. All that is required is open access for a sump pump to be placed at a pick-up point. Also included in our price are samples to be taken daily showing TSS removal before and after the filter and BOD removal before and after the filter. Mitcherson's demo unit has real-time monitoring and tracking capability that can actually trend the solids loading of your process. All this information will be compiled and included in a report along with all laboratory test data and will be provided to you after the demonstration. The final report will reassess recommended sizing for your application as well.

Description	Price
1 Week Demo	$7,500

Finally, Mitcherson is proud to offer an EcoSieve discount for those who purchase a demonstration. In order to encourage our customers to first pilot our equipment we are offering the price of a 1 week demonstration off the purchase price of any order for one or more EcoSieve units. This means the demo cost is essentially free if you purchase at least one EcoSieve.

Notes:

1. Mitcherson lead times are based on "Notice to Proceed" on Mitcherson shop drawings per the Contract Completion Schedule. Payments are due per the contract Payment Schedule and are not refundable.

2. Mitcherson will provide approved shop drawings within 20 days of "Notice to Proceed" per the Contract Completion Schedule. Contract Engineer is requested to review, approve and return approval drawings within 2 weeks. Failure to return approval drawings within 2 weeks may result in an extension of the quoted lead times.

3. All equipment is shop tested prior to shipment. Mitcherson will notify the customer 10 days prior to a scheduled final shop test. The customer is invited to witness this test at their own cost.

4. Failure to make Shop Drawings payment due prior to shipment per the payment schedule may result in a delay of shipping.

5. Recommended equipment is subject to change if a demonstration is performed and a reassessment shows that recommended equipment size and/or quantities needs to be changed for the application.

Feel free to contact me directly with any questions or concerns you have regarding our quotation.

Michael Anderson
Vice President
(877) 939-0330 ext. 102
(951)-786-8361 (cell)
Email: manderson@mitcherson.com

MITCHERSON

EXCEPTIONS

Please state below any and all exceptions that you are taking to any portion of this Request for Proposals. If not addressed below, the City of Imperial then assumes that the vendor will adhere to all terms and conditions as contained in the proposal document.

1. EcoSieve does not require a blower system and therefore it is not included. Claims that using water to wash the filter belt causes dewatered solids to be wet is invalid. Our dewatering system includes proprietary patent pending features that allows us to achieve 20-40% solid cake with no additional equipment.

2. EcoSieve footprint is larger than the specified footprint. See attached MP-141112 drawings to see how EcoSieve is compatible with the existing design. Our ES-3600 is larger than the SF-6000 because not only does it have a higher capacity @ 3,920 in^2 available filter area, but also because filtered water is separated from the return belt under the conveyor. Filtered water is directed to the alleys in the housing that add to the width of the housing. This feature also enables our model to completely eliminate carry over issues from incomplete belt cleaning.

3. EcoSieve head loss is a fixed 25". See attached MP-141112 drawings to see how EcoSieve is compatible with the existing design piping. The EcoSieve filtered water path is a self-draining system. The SF-6000 raises the effluent connection to create a settling effect in the tank which requires frequent draining and cleaning. The EcoSieve has no low points in the filtered water flow to accumulate un-wanted solids.

4. EcoSieve weight is higher than specified weight limits. The EcoSieve is engineered with a very rigid design intended to maximize equipment run time and minimize wear and tear. Additionally our belt conveyors have a robust design that allows the conveyors to be removed by a single point lift. This coupled with the retractable lids makes removing the belt conveyors for maintenance an activity that only takes minutes instead of days.

5. EcoSieve ES-3600 will contain two (2) rotating filter belts.

6. EcoSieve ES-3600 will require one 1" NPT connection for cold water and one 1" NPT connection for hot water.

7. Firm's references are management's prior experience. See about Mitcherson.

REFERENCES

Please list below name of business, address, telephone number, and contact person.

1. CNP, 9535 58th Place, Kenosha, WI 53144, (262) 705-9973, Gerhardt Forstner

2. Prologis WWTP, 2817 E Cedar St #200, Ontario, CA 91761, (951) 529-1963, Frank Woolls

3. Woodsville WWTP, 9 Armory Ln, Woodsville, NH 03785, (603) 667-1251, Pat Butler

4. South San Francisco WWTP, 195 Belle Air, South San Francisco, CA 94080, (415) 627-8215, Nick Talbot

5. Conserv Building Services, 2803 Gray Fox Road Indian Trail, NC 28079, (949) 903-4757, Wayne Shems

SIGNATURE SHEET

My signature certifies that the proposal as submitted complies with all Terms and conditions as set forth in RFP.

My signature also certifies that this firm has no business or personal relationships with any other companies or persons that could be considered a conflict of interest or potential conflict of interest to the City of Imperial, pertaining to any and all work or services to be performed as a result of this request and any resulting contract with the City of Imperial.
I hereby certify that I am authorized to sign as a Representative for the Firm:

Name of Firm: Mitcherson LLC

Address: 109 East 17th Street Suite 63, Cheyenne, WY 82001

Fed ID No.: 46-3440673

Name (type/print): Michael Anderson

Title: Vice President

Telephone (951) 786-8361

Fax No. (877) 937-0330

Date: November 24, 2014

To receive consideration for award, this signature sheet must be included with the bid, as it shall be a part of your response.

BIDDING SHEET #2 – MICROSCREEN SYSTEM

The undersigned hereby proposed to furnish and deliver the following items of equipment to the City of Imperial, all in strict accordance with the attached and/or incorporated Special Requirements, Technical Specifications, and Drawings, for the following Bid prices:

Bid Item A - Furnish and deliver one (1) microscreen system to provide as detailed in the technical specifications with all appurtenances and patent and/or license fees for a complete system, all for the lump sum of

$ 271,389.32 *
(Figures)

$ TWO HUNDRED AND SEVENTY ONE THOUSAND THREE HUNDRED AND EIGHTY NINE DOLLARS AND 32/100 *
(Written)

Bid Item B - Firm Price for the supply of the manufacturer's shop drawings:

$ 13,692.32 *
(Figures)

$ THIRTEEN THOUSAND SIX HUNDRED AND NINETY TWO DOLLARS AND 32/100 *
(Written)

Bid Item C - Firm Price for the supply of the manufacturer's recommended spare parts not included in the price above (attach list showing individual components and costs):

$ 2,457.00 *
(Figures)

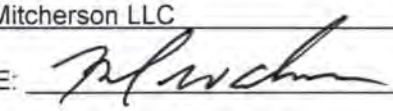
$ TWO THOUSAND FOUR HUNDRED AND FIFTY SEVEN DOLLARS AND NO/100 *
(Written)

* **The above prices include any amount payable by the City of Imperial for taxes by reason of this contract.**

Suppliers must include **all** proposed costs for performance under the contract. Suppliers must provide all personnel and other resources required to complete the contract. Suppliers are solely responsible for start-up and transition expenses. Any costs that cannot be determined, based on the available information, should be indicated and explained.

Does Proposed Equipment meet **All** of the Specifications? NO
If No, please make notations on Exceptions sheet.

BIDDER: Michael Anderson, Mitcherson LLC

AUTHORIZED SIGNATURE: 

TITLE: Vice President

VIII. PAYMENT SCHEDULE

Contract Completion Schedule

Item of Work	Calendar Days for Completion Contract Completion Time	Bidder's Completion Time
1. Receipt by the City of complete, approved manufacturer's shop drawings and installation instructions (includes 14 days for Engineer's review).	60*	20
2. Delivery of equipment to the project site:		
a. Complete and Operable Equipment Ready for Delivery	225*	100

* Commencing on Date of "Notice to Proceed" issued by the City of Imperial during the design phase of the project.

Work shall be completed per the Contract Completion Time, unless Alternate Completion Times, herein references as "Bidder's Completion Time", is proposed by Bidder, as set forth herein, and is approved by Owner.

Equipment Supplier is advised that "Liquidated Damages" of $1,500.00 per calendar day, including Saturdays, Sundays, and Holidays, may be assessed for each calendar day each item or sub-item of work remains incomplete after the Contract Completion Time in accordance with the CONTRACT COMPLETION TIME or the BIDDER'S COMPLETION TIME, whichever is in force. Equipment as delivered shall be complete and operable requiring only installation. Contract is subject to "Liquidated Damages" due to delays in performing remedial work if equipment as determined by the City of Imperial does not perform as specified. Total amount of Liquidated Damages shall not exceed 10% of the Total Contract Amount.

The City of Imperial or selected Contractor will transmit a "Notice to Proceed" to Equipment Supplier upon receipt of an executed Agreement or Purchase Order. Thereafter, the Equipment Supplier shall commence ordering equipment and preparation of shop drawings.

F. Contract Manager

The Supplier shall provide one Contract Manager who shall be responsible for the performance of the work. The name of this person and an alternate who shall act for the Supplier when the manager is absent shall be designated in writing as part of this Proposal. The Contract Manager or alternate shall have full authority to act for the supplier on all contract matters relating to the daily operation of this contract.

G. Equipment

REFERENCE SPECIFICATION DETAILS IN EXHIBIT TWO.

Supplier shall provide "New" equipment as defined as newly assembled for first-time use with new components. It must be eligible for a minimum one-year warranty.

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PROVIDING SOLUTIONS FOR A BETTER FUTURE
109 East 17th St Suite 63
Cheyenne, WY 82001
Phone/Fax: (877) 937-0330
email: sales@mitcherson.com
GOBLE SAMPSON ASSOCIATES INC.

Terms and Conditions

1. Application of Conditions: The Seller shall sell and the Buyer shall purchase the Goods in accordance with any quotation or offer of the Seller which is accepted by the Buyer, or any order of the Buyer which is accepted by the Seller. Seller's acceptance of any order is expressly made conditional upon the Buyers acceptance of all terms and conditions contained herein and on the face of the seller's sales order acknowledgement. Seller objects to any additional or different terms and conditions, whether contained in buyer's forms or otherwise.
2. Definitions:
    a. Buyer: The organization or person who buys the goods
    b. Goods: Any products or services provided by the Seller
    c. Seller: Mitcherson LLC
    d. Order: Buyer's expressed request, whether oral or written, to purchase Goods from Seller.
3. Payment Terms: Payment schedule shall be in accordance with a seller's quotation or written sales agreement. Payments shall be made by wire transfer, check or alternative methods approved by the Seller. Pricing is only valid for the specific time period stated on seller's quotation or written sales agreement. Failure by Buyer to make payments in accordance with the agreed payment schedule constitutes a default. In such case, and in addition to any other rights available to Seller at law or in equity, Seller will be entitled to assess interest charges upon Buyer for any overdue amount. All orders are subject to credit approval by Seller. Whenever reasonable grounds for insecurity arise with respect to due payment from Buyer or with respect to Buyer's financial condition generally, Seller may demand different terms of the payments from those agreed in the order, and may demand additional assurance of Buyer's due payment. Any such demand may be oral or in writing and Seller may, upon the making of such demand, stop production and suspend shipments hereunder.
4. Pricing: Sales Literature, price lists and other documentation issued by the seller in relation to the goods are subject to change without notice and do not constitute offers to sell the goods which are capable of acceptance. No contract for the sale of goods shall be binding on the seller unless the seller has issued a quotation which is expressed to be an offer to sell the goods or has accepted an order placed by the buyer.
5. Confidentiality: Unless otherwise agreed in writing by Seller, Buyer will not disclose the pricing or other terms of this order to any third party.
6. Taxes: The prices and charges stated on the quotation and sellers sales order acknowledgment do not include state or federal excise, sales or use, or other taxes (if any) now in effect or hereafter levied by reason of this transaction. The amount of any such taxes, tariffs, duties and special assessment applicable to the Goods shall be paid by the Buyer in the same manner and with the same effect as if originally included in the purchase price.
7. Warranty: Seller warrants to Buyer that Goods to be free of defects in material and workmanship and to conform to Mitcherson LLC manufacturing standards (except the effects of corrosion, erosion or normal wear and tear are specifically excluded unless otherwise agreed in writing and upon written notification that Seller agrees to repair or replace without cost.). This warranty is in effect for a period of 12 months of operation or eighteen months from the time of shipment, whichever is shorter. During the warranty period Seller will repair or replace at seller's expense any defective parts within a reasonable time frame. An inspection of the defective part may be necessary in order for the warranty claim to be accepted. If seller acknowledges that equipment it has supplied is non-conforming, its obligation shall be limited to replacing the equipment, to the exclusion of all damages (excluding the cost of removal, reinstallation, or gaining access to equipment to be repaired or replaced). No returns shall be accepted without seller's prior agreement and if equipment has not been used in accordance with generally accepted industry practice and the instructions included with each piece of equipment. Seller makes no representation or warranty of any kind, express or implied, with respect to any product, including, without limitation, any warranty of merchantability, non-infringement or fitness for any particular purpose, and we hereby disclaim same. In no event will the seller be liable, whether in contract, tort, or under any other legal theory, for lost profits or revenues, loss of use or similar economic loss for any indirect, special, incidental, consequential, punitive or similar damages arising out of or in connection with any products or services, even if they have been advised of the possibility of such claim. In no event will sellers monetary liability (whether in contract, tort or under any other legal theory) in respect of any product or service exceed the purchase price that the buyer paid the seller. Any warranty will be void for products that have been subject to abnormal use, abnormal conditions, improper storage, exposure to hostile elements, unauthorized repairs, misuse, neglect, accident, alteration, improper installation of other acts which are not the fault of the seller, including damage caused by shipping.
8. Inspection, Acceptance or Rejection: Inspection, acceptance, or rightful rejection of Goods shall be made promptly by the Buyer within ten (10) days after Buyer's receipt of Goods. Buyer shall promptly notify

Seller in writing (via email or US mail) if Buyer believes that any Goods delivered hereunder are properly rejectable and hold such Goods pending Seller's inspections.

9. Buyer's Warranty: Notwithstanding any other provision contained herein or any other obligation of Buyer hereunder, Buyer, upon acceptance of Goods that are the subject of this Order, warrants that Buyer, its successors, assigns, agents and employees are industrial or municipal users of such Goods and possess the knowledge and expertise to the same in accordance with (A) accepted industry standards (B) all applicable laws, (C) prudent safety practices and (D) operating manuals or other instructions provided by Seller, if any.
10. Delays: Seller shall use reasonable efforts to fill this order in accordance with the estimated lead time, but shall not be responsible unless specific penalties are agreed upon in the purchase order for any delays in filling this Order nor liable for any losses or damages resulting from such delays.
11. Force Majeure: Mitcherson will not be liable or otherwise responsible for any damage, loss, fault, or expenses arising out of delays in manufacturing, shipment or other non-performance of any Purchaser Order caused or imposed by: strikes, fires, disasters, riots, acts of nature; intervention of government, war or threat of war, acts of terrorism, conditions similar to war, sanctions, blockades, embargoes; acts of Customer; shortages of labor, fuel, power, materials, supplies, transportation, or manufacturing facilities; governmental action, subcontractor delay or any other cause, condition or circumstance beyond Mitcherson's reasonable control. If there is a delay or nonperformance due to Force Majeure, then seller may, at its option, and without liability, revoke all or any portion of its acceptance of Buyer's Purchase Order and/or extend any date upon which any performance thereunder is due
12. Intellectual Property Rights: All Intellectual Property Rights produced from or arising as a result of the performance of this Order shall, so far as not already vested, become the absolute property of the Seller, and the Buyer shall do all that is reasonably necessary to ensure that such rights vest in the Seller by the execution of appropriate instruments or the making of agreements with third parties. The purchase of goods from seller does not entitle buyer to use, register, or otherwise identify buyer or its business with the name, trademark, service mark or other identity of seller without written permission from seller.
13. Termination of Order: Buyer may not terminate this Order without the written consent of the Seller. If Seller consents to such termination, reasonable termination charges computed by Seller shall be assessed in connection with such termination.
14. Delivery and Transportation: Delivery and transportation provisions applicable to this order shall be those stated in the quotation or written sales agreement.
    a. Where shipping terms are designated FOB destination, seller will deliver and bear the cost of transportation of such goods to such destination in accordance with the provisions of this paragraph. The method and agency of transportation and the routing will be designated by the seller. Excess packing, shipping and transportation charges that result from compliance with respect to the use of any agency or method of transportation or any routing other than that which would be designated by the seller shall be for buyer's account. In the case of buyer pick-up, buyer's truck in the destination, and unless seller otherwise agrees in writing, seller will not deliver or bear any cost of shipment or transportation, or make any allowance with respect thereto, beyond loading onto buyer's truck. Buyer shall bear all risk of loss or damage upon seller's loading of goods onto buyer's truck.
    b. Where shipping terms are designated FOB seller's plant, the cost of transportation and risk of loss or damage thereof shall be borne by Buyer.
15. Transit Risk and Insurance: The seller is not liable for any good lost, damaged, or destroyed while in transit and buyer acknowledges and agrees that any risk of such loss damages, or destruction transfers to, and is assumed by Buyer upon delivery of the Goods to the carrier or when otherwise placed in transit. Additional Insurance maybe available at buyer's expense to insure against loss or unusual damage and is not automatically included in shipping charges. Goods must be inspected immediately for freight or shipping damage upon receipt, and if damaged, buyer must immediately file a claim with the carrier.
16. Export Licensing:
    a. Buyer and Seller shall comply with all national and international export and control regulations. Equipment, technology and technical data shall not be exported, re-sold, diverted, re-exported or disposed of in other country of ultimate destination (currently approved by the United States Government), without the prior approval of the United States Department of State or Commerce or other Agency of the United States Government, whichever is appropriate.
    b. Seller shall assume no liability in the event that an export license is not approved or later withdrawn by the United States Government or other applicable Government.
    c. Where Buyer requests a routed transaction (meaning it will along with its U.S. freight forwarder accept responsibility as U.S Exporter of Record to attain such applicable Government approvals) it shall supply all required documentation to the Seller including the required routed transaction letters from both Buyer and designated U.S. designated Forwarder/agent.

Appendix – A
Data Sheet

Rev.No	A	
	By	Date
Prepared	CM	11/14/14
Check	AM	11/14/14
Approved	MA	11/14/14

REV

DATA SHEET
ECOSIEVE FILTER

MITCHERSON
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Job No. PROPOSAL
P.O. No.
Project MITCHERSON QUOTATION # 2000-141112
Customer CITY OF IMPERIAL, CA

MODEL: ES-3600-CG TAG NUMBERS PROVIDED BY CUSTOMER IF APPLICABLE

PERFORMANCE - DESIGN

DESIGN	
FILTER BELT MICRON OPENING	350
EXPECTED FILTER CAPACITY (GPM)	1830-2200
CAPACITY FOR SIZING (GPM)	2014
CLEANWATER CAPACITY (GPM)	4240
TYPE OF SOLIDS DISCHARGE	SEMI-DRIED CAKE
INFLUENT FLOW TYPE	GRAVITY FLOW
SOLIDS HANDLING SYSTEM	SEE NOTE 1
MACHINE BASIC DIMENSIONS	215" W x 133" D x 70" T
OPTIONAL HOT WATER DESIGN	17.6 GPM @ 175F
TOTAL EQUIPMENT SHIPPING WEIGHT	7,000 LBS
CONVEYOR ASSEMBLY WEIGHT	915 LBS
TOTAL EQUIPMENT OPERATING WEIGHT	13,850 LBS

ELECTRICAL

BELT MOTOR HP, V, PH, Hz	1.0 / 230/460 VAC / 3PH / 60 Hz
AUGER MOTOR HP, V, PH, Hz,	3.0 / 230/460 VAC / 3PH / 60 Hz
WASH PUMP HP, V, PH, Hz	1.5 / 230/460 VAC / 3PH / 60 Hz
AUX. PUMP HP, V, PH, Hz	0.4 / 120 VAC / 1PH / 60 Hz

MATERIALS OF CONSTRUCTION

HOUSING	TYPE 316L SS
BELT	PET, MONOFILAMENT
GASKETS	BUNA-N
TIMING BELT	URETHANE / KEVLAR
TIMING BELT SPROCKETS	UHMW
BELT HOLD DOWNS	HDPE
BELT SUPPORTS	HDPE
AUGER	TYPE 316L SS
WEDGE WIRE FILTER	TYPE 316L SS

WATER WASH

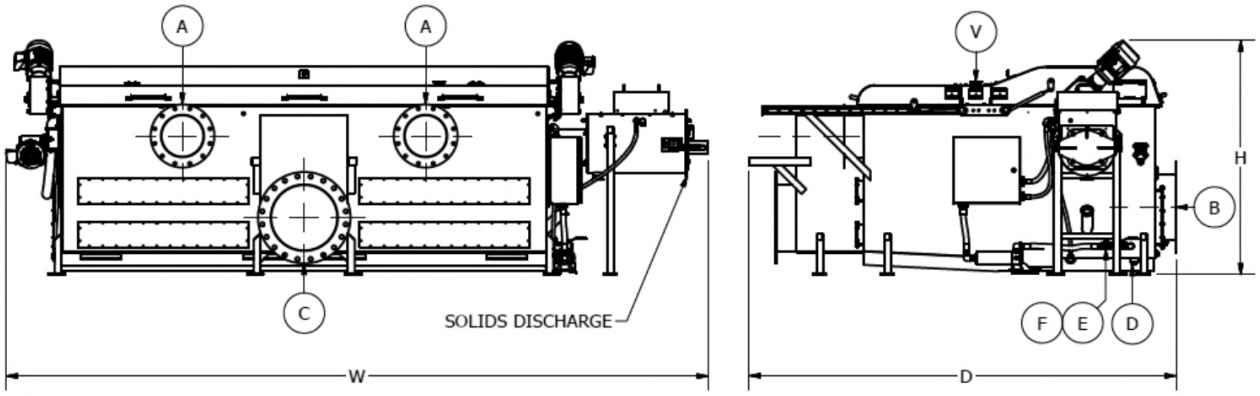
FLOW REQUIREMENT FOR NORMAL CYCLE	15.1 GPM
FLOW REQUIREMENT FOR CLEAN CYCLE	17.6 GPM
MINIMUM SUPPLY PRESSURE	40 PSI
BOOSTED PRESSURE	80-120 PSI
STRAINER MESH	50 US MESH
OPTIONAL HOT WATER CONNECTIONS	INCLUDED
OPTIONAL DUPLEX STRAINER ARRANGEMENT	NOT INCLUDED
OPTIONAL STRAINER SOLENOID VALVES	NOT INCLUDED
OPTIONAL PRESSURE TRANSMITTER	INCLUDED
SOLENOID VALVES MANUFACTURER	BURKERT
SOLENOID VALVES MODEL / SPEC	FKM, 24V AC/DC, MODEL 0290

CONNECTIONS

	MARK	SIZE	TYPE	DRILLING
INFLUENT	A	12" / 12"	FLANGE	150#
EFFLUENT	B	16"	FLANGE	150#
OVERFLOW	C	16"	FLANGE	150#
HOUSING DRAIN	D	1"	THREADED	FNPT
WATER WASH INLET	E	1"	THREADED	FNPT
SAMPLE CONNECTION	F	3/4"	THREADED	FNPT
HOUSING VENT	V	4"	FLANGE	150#

SCOPE OF SUPPLY

BRIDGE CRANE WORK STATION	NOT INCLUDED
CONTROL PANEL	EC-0001 STYLE PANEL INCLUDED
MOTOR CONTROL CENTER	LOCATED IN EC-0001 PANEL
SKID MOUNT	NOT INCLUDED
SOLIDS CONYEYING SYSTEM	SEE NOTE 1
COLLECTION HOPPER	SEE NOTE 1
INFLUENT PUMP	NOT INCLUDED
HOT WATER SYSTEM	INCLUDED

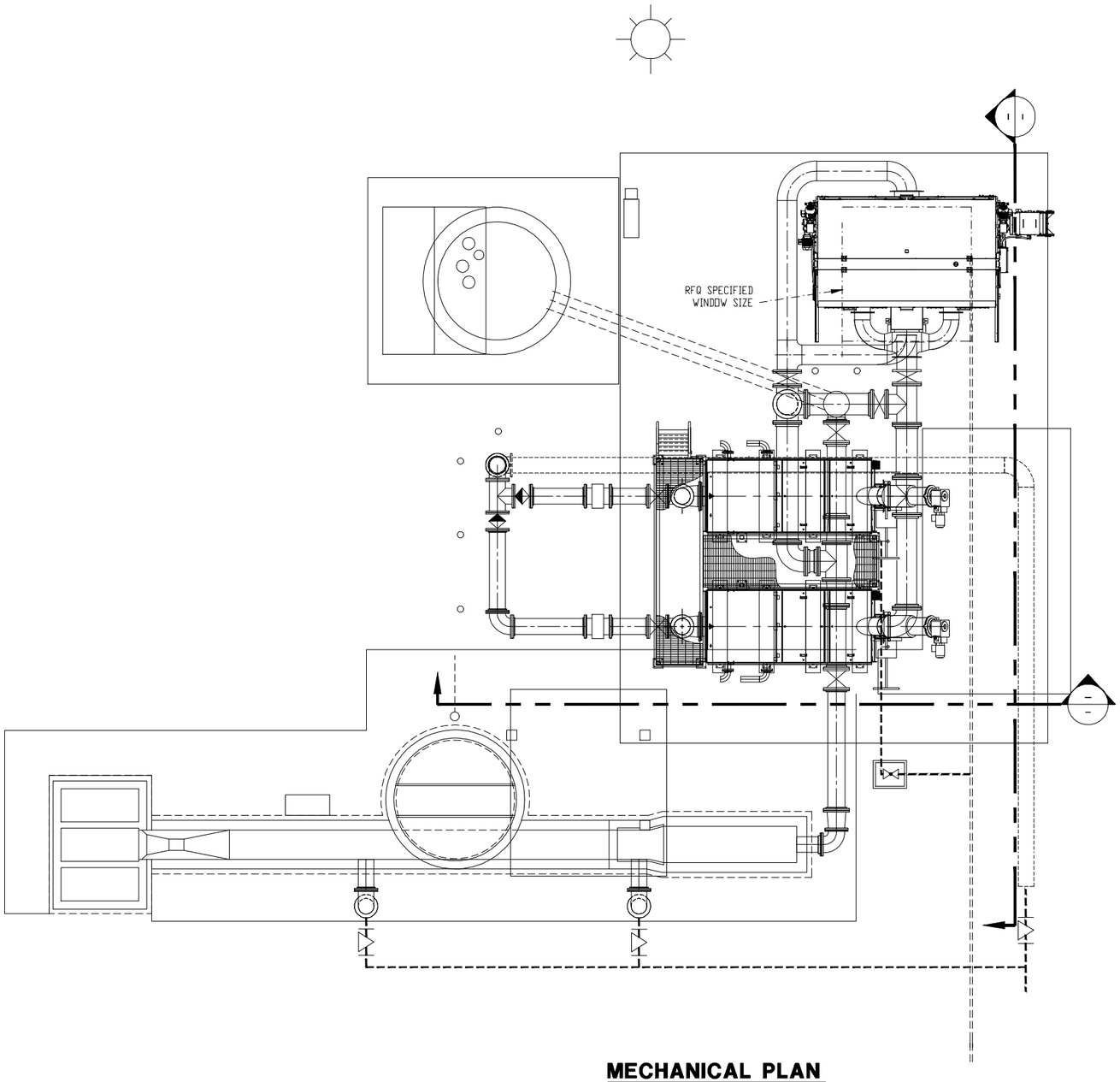


REMARKS

1. DEWATERING SYSTEM SHALL INCLUDE STAINLESS STEEL DISCHARGE CHUTE AND SELF BAGGING UNIT.
2. ES-3600 IS A DUPLEX MODEL THAT CONTAINS (2) FILTER BELT CONVEYORS CONTAINED IN TWO CONVEYOR BAYS IN ONE COMMON HOUSING.
3. DUPLEX MODEL IS SUPPLIED WITH (2) CONVEYOR MOTORS, (1) AUGER MOTOR, (1) WASH PUMP, (2) AUX. PUMPS. 5.5kW SERVICE REQUIRED

109 East 17th St Suite 63
Cheyenne, WY 82001
Phone/Fax: (877) 937-0330
email: sales@mitcherson.com

Appendix – B
Mechanical Plan Drawing



PRELIMINARY
NOT FOR CONSTRUCTION
FOR QUOTATION PURPOSES ONLY

OPTION 1
PER ORIGINAL LAYOUT
(ORIGINAL ORIENTATION)

MECHANICAL PLAN
SCALE: 1/4"=1'-0"

0 4 8
Scale In Feet

REV	DESCRIPTION	BY	CHK'D	APP'D	DATE
A	FOR PROPOSAL	JCM	AHM	MWA	11/13/14

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WWW.MITCHERSON.COM (713) 306-2274

TITLE: CITY OF IMPERIAL, CA
PROPOSAL

DRAWING NUMBER: MP-141112-1

UNLESS OTHERWISE SPECIFIED:
1. DIMENSIONAL TOLERANCES APPLY
2. DIMENSIONS ARE IN INCHES
3. DEBURR AND BREAK ALL SHARP EDGES, R .020

.X ± .030 FRACTIONS ± 1/16
.XX ± .010 ANGLES ± 0°30'
.XXX ± .005

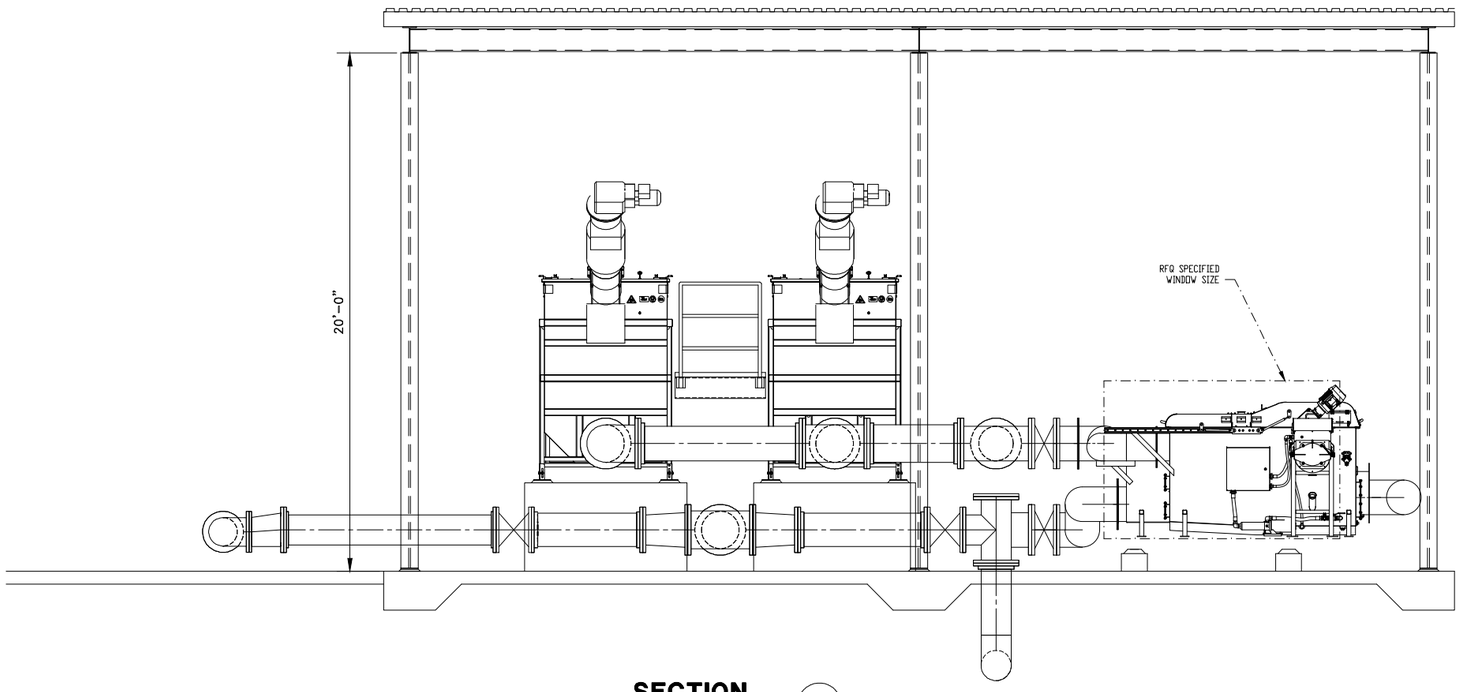
DRAWN BY: JCM
DATE: 11/12/2014

WT. / LBS.

SHEET 1 OF 1

REVISION: 0

PRELIMINARY
NOT FOR CONSTRUCTION
FOR QUOTATION PURPOSES ONLY



SECTION
SCALE: 3/8"=1'-0"
0 2 4
Scale in Feet

OPTION 1
PER ORIGINAL LAYOUT
(ORIGINAL ORIENTATION)

REV	DESCRIPTION	BY	CHK'D	APP'D	DATE
A	FOR PROPOSAL	JCM	AHM	MWA	11/13/14

MITCHERSON
PROVIDING SOLUTIONS FOR A BETTER FUTURE

WWW.MITCHERSON.COM (713) 306-2274

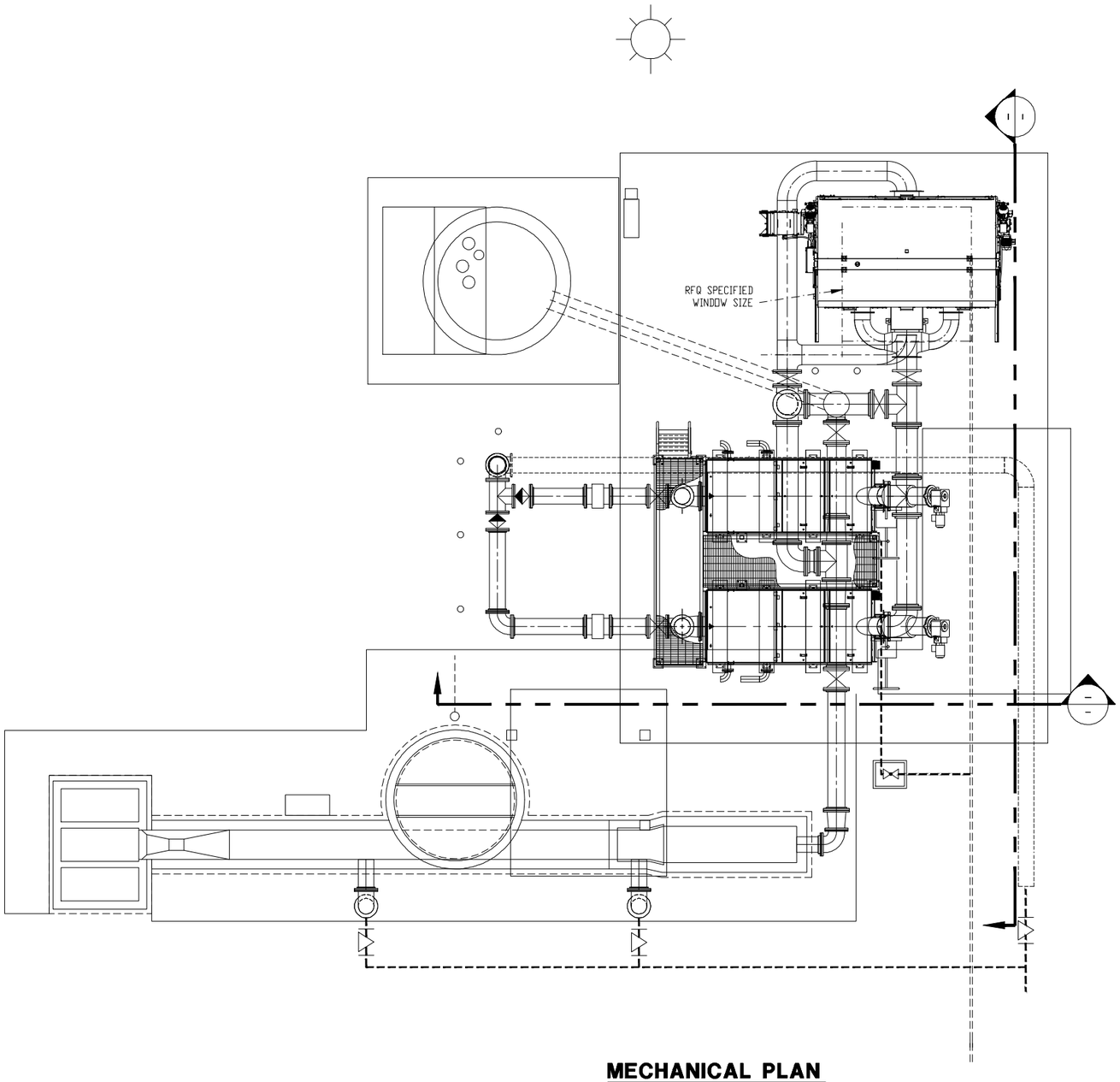
TITLE: CITY OF IMPERIAL, CA
PROPOSAL

DRAWING NUMBER: MP-141112-2

UNLESS OTHERWISE SPECIFIED:
1. DIMENSIONAL TOLERANCES APPLY
2. DIMENSIONS ARE IN INCHES
3. DEBURR AND BREAK ALL SHARP EDGES, R .020

.X ± .030 FRACTIONS ± 1/16
.XX ± .010 ANGLES ± 0°30'
.XXX ± .005

DRAWN BY:	JCM	WT. / LBS.	SHEET 1 OF 1
DATE:	11/12/2014		REVISION: 0



PRELIMINARY
NOT FOR CONSTRUCTION
FOR QUOTATION PURPOSES ONLY

OPTION 2
PROPOSED LAYOUT
(REVISED ORIENTATION)

MECHANICAL PLAN
SCALE: 1/4"=1'-0"

0 4 8
Scale In Feet

REV	DESCRIPTION	BY	CHK'D	APP'D	DATE
A	FOR PROPOSAL	JCM	AHM	MWA	11/13/14

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PROVIDING SOLUTIONS FOR A BETTER FUTURE

WWW.MITCHERSON.COM (713) 306-2274

TITLE: CITY OF IMPERIAL, CA
PROPOSAL

DRAWING NUMBER: MP-141112-3

UNLESS OTHERWISE SPECIFIED:
1. DIMENSIONAL TOLERANCES APPLY .X ± .030 FRACTIONS ± 1/16
2. DIMENSIONS ARE IN INCHES .XX ± .010 ANGLES ± 0°30'
3. DEBURR AND BREAK ALL SHARP EDGES, R .020 .XXX ± .005

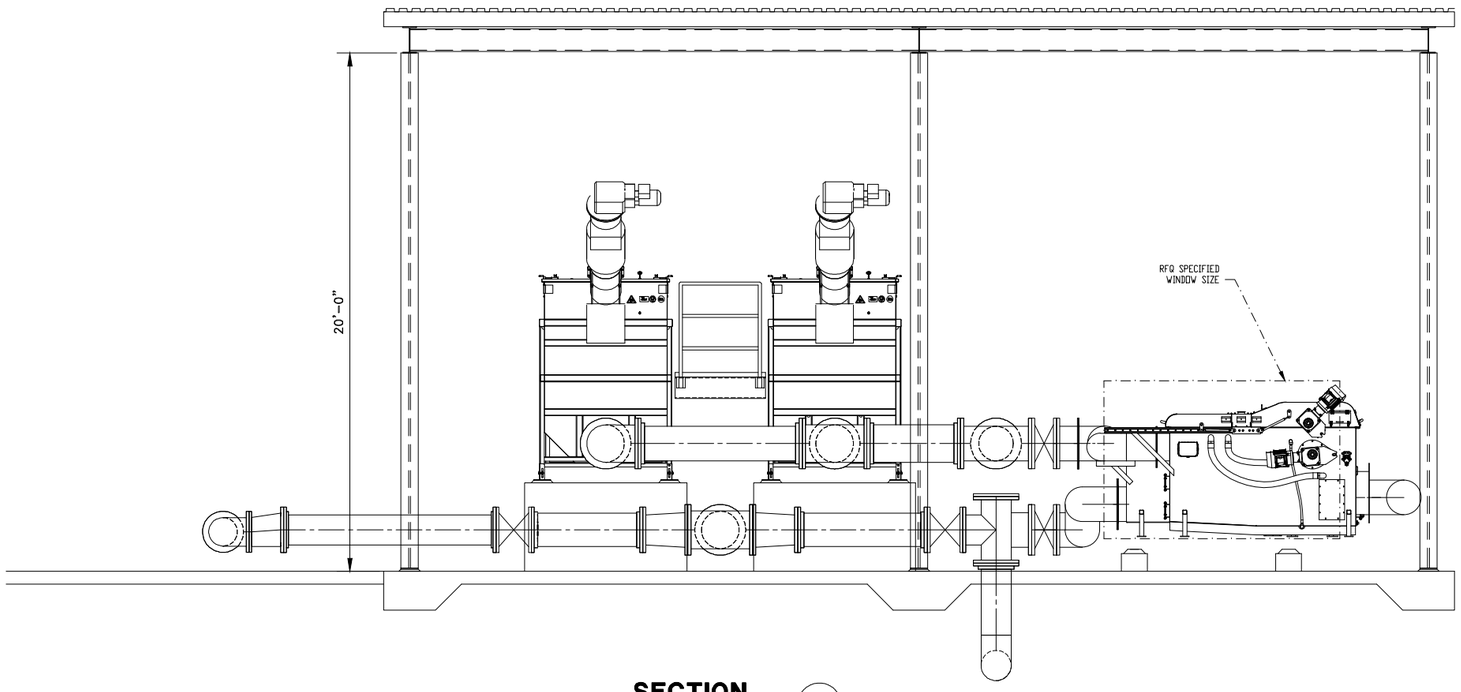
DRAWN BY: JCM
DATE: 11/12/2014

WT. / LBS.

SHEET 1 OF 1

REVISION: 0

PRELIMINARY
NOT FOR CONSTRUCTION
FOR QUOTATION PURPOSES ONLY



SECTION
SCALE: 3/8"=1'-0"
0 2 4
Scale in Feet

OPTION 2
PROPOSED LAYOUT
(REVISED ORIENTATION)

REV	DESCRIPTION	BY	CHK'D	APP'D	DATE
A	FOR PROPOSAL	JCM	AHM	MWA	11/13/14

MITCHERSON
PROVIDING SOLUTIONS FOR A BETTER FUTURE

WWW.MITCHERSON.COM (713) 306-2274

TITLE: CITY OF IMPERIAL, CA
PROPOSAL

DRAWING NUMBER: MP-141112-4

UNLESS OTHERWISE SPECIFIED:
1. DIMENSIONAL TOLERANCES APPLY
2. DIMENSIONS ARE IN INCHES
3. DEBURR AND BREAK ALL SHARP EDGES, R .020

.X ± .030 FRACTIONS ± 1/16
.XX ± .010 ANGLES ± 0°30'
.XXX ± .005

DRAWN BY:	JCM	WT. / LBS.	SHEET 1 OF 1
DATE:	11/12/2014		REVISION: 0

Appendix – C
Mitcherson Municipal Brochure

MITCHERSON

PROVIDING SOLUTIONS FOR A BETTER FUTURE

EcoSieve Municipal Primary Treatment

The Mitcherson EcoSieve™

The EcoSieve™ is a high efficiency, high flow liquid solid separator that provides large scale primary treatment in an economical compact modular package. The EcoSieve™ is a mechanical device that screens suspended solids from incoming liquids. Captured solids are collected and dewatered and exiting liquids are filtered. The EcoSieve™ solid separation efficiency is typically between 40-70% removal of TSS for medium strength waste water making the EcoSieve a viable replacement technology for conventional gravity settling filters. Figure 1 shows the comparison of two primary clarifiers with a foot print of approximately 14,800 $ft^{2,}$ where the (4) ES-3600 machines occupy only 1,368 ft^2. The EcoSieve technology in this example requires less than 10% of the real estate from conventional technologies. In addition an EcoSieve installation will typical cost only a fraction of the cost of conventional technologies, usually less than half. These huge cost and space savings make the EcoSieve™ the perfect solution for municipal plants that need to increase capacity of existing systems or looking to replace existing equipment that is near the end of its life cycle.

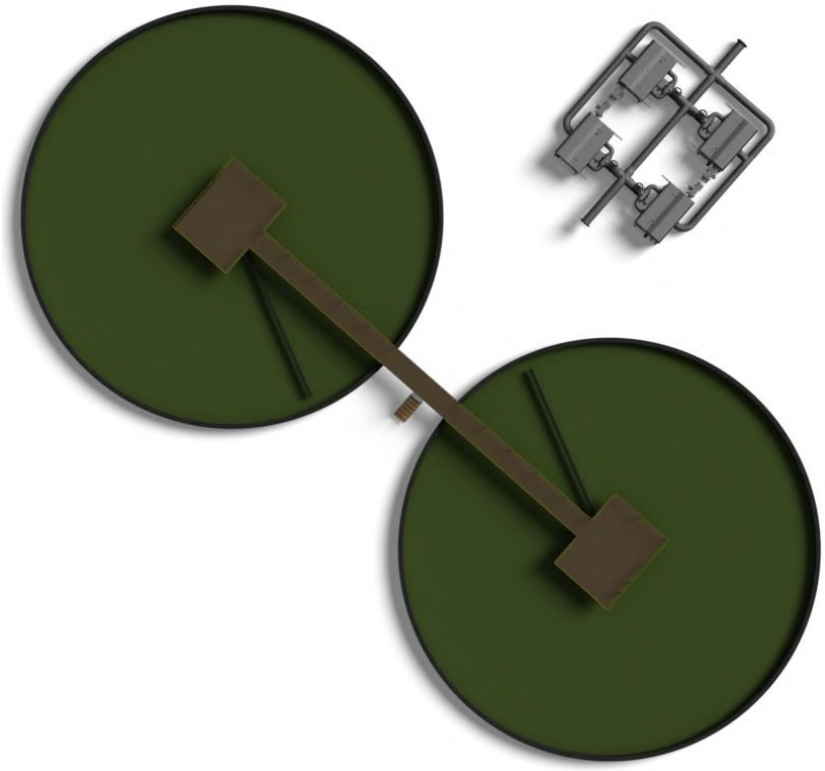


Figure 1. Mitcherson EcoSieve™ versus conventional primary clarifiers – less than 10% of the space required.

EcoSieve™ Design Detail

Mitcherson believes that the key to success is to provide the best possible equipment at the lowest possible cost. Our close attention to engineering and performance has resulted in the design of equipment that out-performs others, is reliable, and operator friendly.

Mitcherson EcoSieve™ Operation

The Mitcherson EcoSieve™ utilizes a proprietary and patent pending continuous sieve to separate solids from influent. The EcoSieve™ pumps influent through a revolutionary rotating polyester sieve with openings between 150 to 800 microns.

The continuous belt screen conveys influent in an enclosed tank, which is then filtered and directed to downstream process equipment. The sieved solid residue is then conveyed above the tank liquid level, to the belt cleaning section, and removed by dewatering where solids are expelled as a cake. The dewatered solids or cake can discharge to a container or to a conveying system for either quick disposal or conversion to energy.

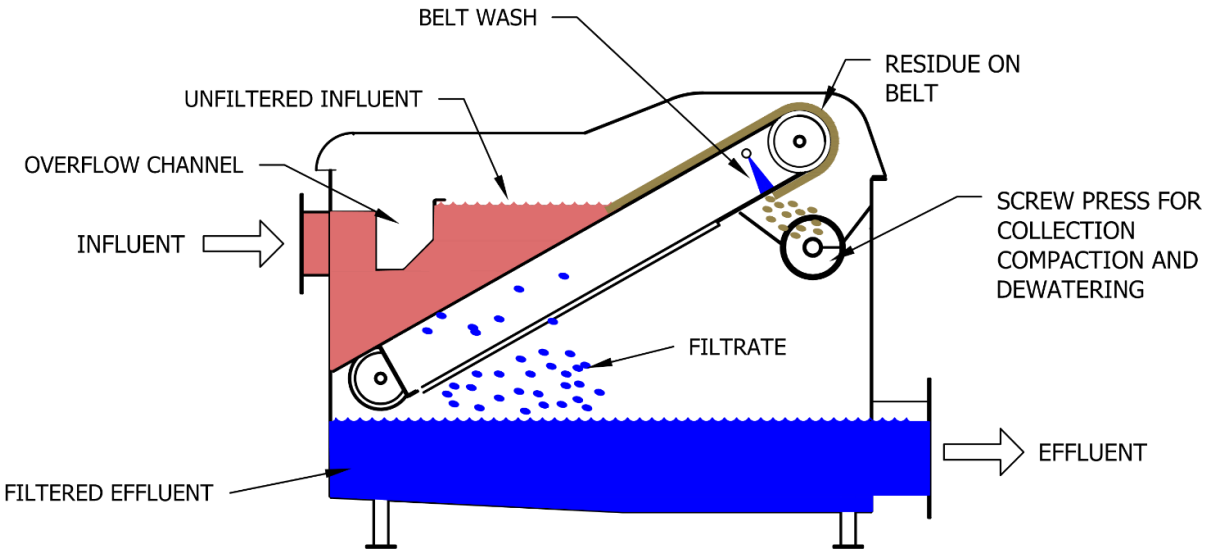


Figure 2. Mitcherson EcoSieve™ Flow Schematic.

Figure 3. Dewatered "Fresh Solids" from the Mitcherson EcoSieve™.

Mitcherson is proud to offer (4) different EcoSieve models to our customers. No job is too big or small for the EcoSieve.

Table 1. Mitcherson EcoSieve™ Product Information

-	- MITCHERSON ECOSIEVE™ DESIGN DATA -			
Performance	**ES-270**	**ES-940**	**ES-1800**	**ES-3600**
Maximum Hydraulic Capacity[1] GPM (LPM)	300 (1,136)	1,045 (3,955)	2,120 (8,024)	4,240 (16,048)
Treated Flow[3] MGD (m^3/hr.)	0.20 (31)	0.70 (110)	1.45 (229)	2.90 (458)
%-TSS Removal Efficiency (typical)	40-70 %	40-70 %	40-70 %	40-70 %
%-Solids from Dewatering (typical)	30-40 %	30-40 %	30-40 %	30-40 %

Model	**Weight**	**Dimension**	**KWh Rating**	**Estimated Power Usage[2]**
ES-270	1,230 lbs. (558 kg)	78" W x 69" D X 52" H 2.0m W x 1.8m D X 1.3m H	1.63 kWh (2.2 HP)	27 kWh/day
ES-940	1,790 lbs. (812 kg)	95" W x 81" D X 59" H 2.4m W x 2.1m D X 1.5m H	1.69 kWh (2.3 HP)	28 kWh/day
ES-1800	4,390 lbs. (1,991 kg)	132" W x 94" D X 70" H 3.3m W x 2.4m D X 1.8m H	3.12 kWh (4.2 HP)	52 kWh/day
ES-3600	7,000 lbs. (3,175 kg)	216" W x 133" D X 70" H 5.5m W x 3.4m D X 1.8m H	5.47 kWh (7.3 HP)	92 kWh/day

[1]Actual throughput capacities will depend on belt screen porosity and incoming solids loading (i.e., TSS)
[2]Estimated power consumption based on 24-hr continuous operation & 70% duty cycle (average)
[3]Estimated treated flow is based on medium strength waste water in municipal applications using 300 micron sieve

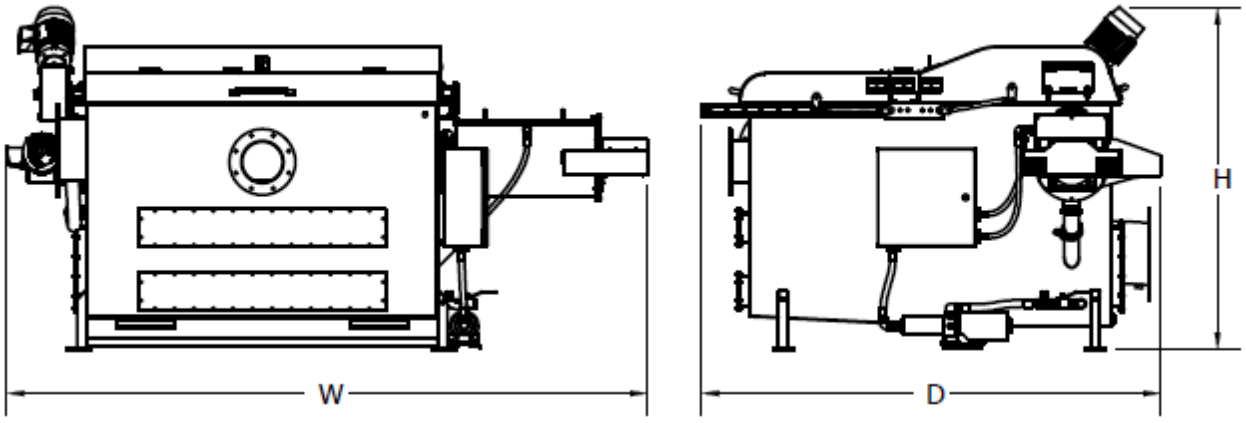


Figure 4. ES-1800 Stand-alone unit

Figure 5. ES-3600 Stand-alone unit

The Mitcherson EcoSieve Models ES-270, ES-940, ES-1800 are single belt machines. The ES-3600 is a duplex arrangement with 2 belt assemblies installed in one housing with one solids collection system. The EcoSieve can be provided as a stand-alone unit or mounted on a pre-wired skid platform which drastically reduce field installation cost. Our skid units can be mobile units ready for deployment. Permanent installations can be set-up with automated solid collection systems taking significant labor out of managing solids produced in large scale operations. All EcoSieve units are provided with a basic control system. Mitcherson can customize the control system for remote control, real-time monitoring, upgraded human interface and additional controls for auxiliary systems. Many options are available to make an EcoSieve installation the perfect fit for your application. Contact Mitcherson today to find out how we can help you.

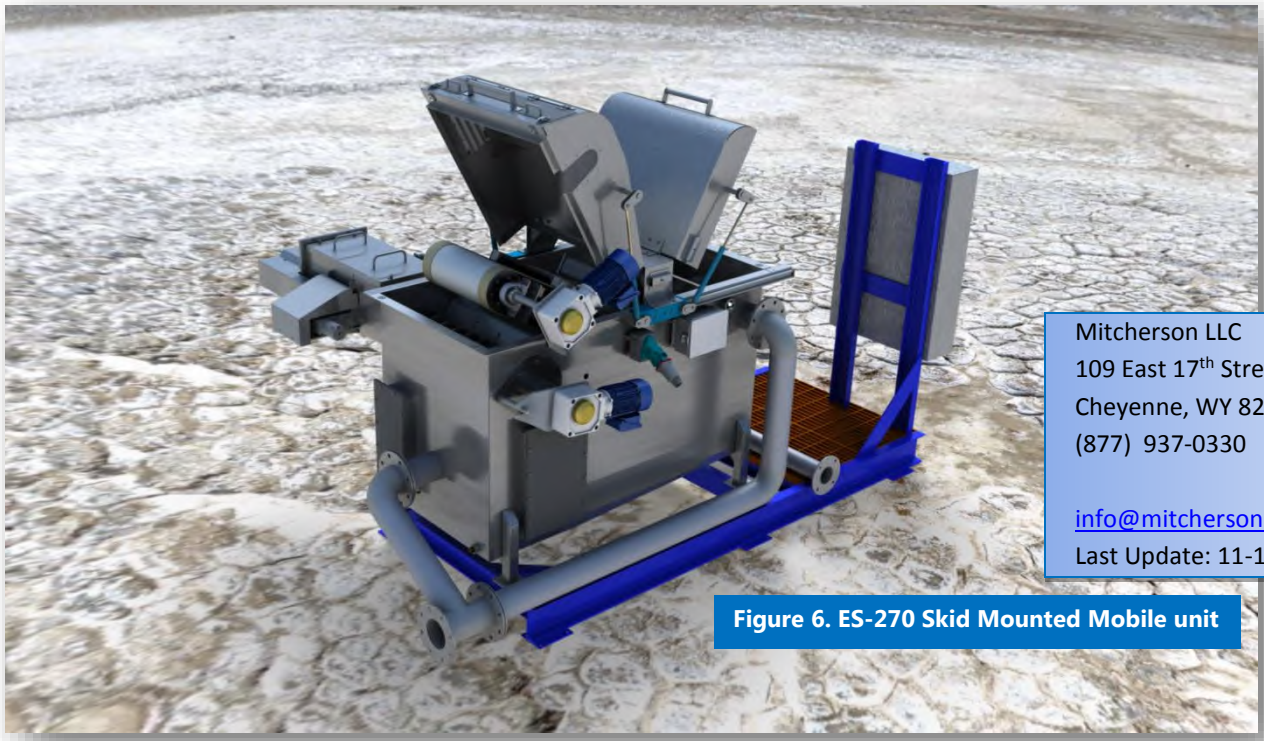


Figure 6. ES-270 Skid Mounted Mobile unit

Mitcherson LLC
109 East 17th Street Suite 63
Cheyenne, WY 82001
(877) 937-0330

info@mitcherson.com
Last Update: 11-14-2014

Attachment E

Huber Technology

Headworks Screen Bid

City of Imperial WWTP

Headworks Upgrade

City of Imperial, CA

Bid Documents

November 24, 2014

Submitted by:
Huber Technology Inc.

9735 Northcross Center Court, Suite A
Huntersville, NC 28078

TABLE OF CONTENTS

Section I: Cover Letter

Date: **November 24, 2014**

To: **City of Imperial, CA**

Reference: **Bid Item #1**

Subject: **RPPS/1400T/3**

Thank you for giving Huber Technology the opportunity to provide a comprehensive proposal for the City of Imperial screening project.

Huber is a privately owned, German company, founded in 1872. Huber designs, manufactures and services stainless steel equipment for the water and waste water industry. The company is located in Erasbach, Upper Bavaria. This area is home to many high quality manufacturing companies such as Audi, BMW, Flender, Siemens etc. All of Huber's products sold around the world are designed, manufactured in this facility. Huber does not outsource any engineering, manufacturing or service work.

Huber holds ISO 9001 and ISO14001 certifications. Unlike other companies Huber ensures that only stainless steel is used in the manufacturing process. All equipment pieces are fully submerged and passivated in a pickling bath. This process ensures the elimination of dust particles left over from the manufacturing process. Since the equipment is submersed overnight in a tank, even the tightest corners, crevasses and tubes will be passivated to ensure best possible corrosion protection for the equipment and thus the best Return of Investment for our customers.

Huber has more than 17,000 machine systems in operation worldwide. Our systems are used for both industrial and municipal applications. More than 1,000 of these systems are in operation in the USA. Huber is a system supplier for headworks equipment and sludge treatment.

Huber has subsidiaries and agencies all over the world. The North American subsidiary (HHUSA) is located in Charlotte, NC, providing full engineering, sales, administrative and after sales services. Spare parts are stocked at our state-of-the art warehouse in Charlotte providing immediate response to our customers. We currently have over $816,000 worth of spare parts inventory in our Charlotte, NC facility.

Upon review of the bid documents we have determined that our offering will provide performance and processing in accordance with conditions and flow ranges called out within technical specifications.

Huber Technology, Inc has a well established reputation of excellence, equipment and support of headworks, screening, grit, and sludge equipment throughout the world. Our offering for the City of Imperial project offers tangible value and real dependability.

Thank you for your consideration on this matter. We look forward to a successful outcome.

Sincerely,

John Attterberry
Applications Engineer
Huber Technology, Inc.
704-990-2040
john.atterberry@hhusa.net

Section II: Scope of Supply/Drawing

SCOPE OF SUPPLY

Project Name: Imperial, CA

Huber Proposal Number: JQ003972

Equipment: 2 x RPPS/1400T/3

Bid Date: 11/24/14

Huber Contact: John Lewis, Western Regional Sales Manager

(704) 995 5451

Represented By: Dave Ritter, Goble Sampson Associates

(801) 268 8790

Huber Technology, Inc.

9735 NorthCross Center Court
Suite A
Huntersville, NC 28078

Phone: (704) 949-1010
Fax: (704) 949-1020

ITEM	QUANTITY	DESCRIPTION
1	2	**ROTAMAT Fine Screens RPPS** **Model:**1400T/3Including: • 316 stainless steel construction; pickled and passivated in acid bath • Tank mounted design with a 16” ANSI inlet, 20” ANSI outlet, and two 4” ANSI odor control connections (locations on tank to be determined) • Shafted screw with integrated maintenance free bearing • 35º inclined auger tube • 35º inclined screen basket; diameter: 55”(1400 mm) • Perforation size: 3 mm • Main Drive Motor 230/460 VAC, 3 phase, 60 Hz, 2 HP, Class 1/Division 1; SF 1.0 • Integrated screenings spray washing system, IRGA • Compaction zone spray washing system • Dewatering zone spray washing system • Two (2) solenoid valves, 1”, 120 VAC, Class 1/Division 1, 2-way brass body for the IRGA • One (1) solenoid valve, 1”, 120 VAC, Class 1/Division 1, 2-way brass body for the Press zone • One (1) solenoid valve, 1-1/4” 120 VAC Class 1/Division 1, 2-way brass body for the spraybar • One (1) solenoid valve, 1”, 120 VAC, Class 1/Division 1, 2-way brass body for the tank wash • Bagging unit included • Anchor bolts
2	1	**RPPS Spare Parts** Including: • One (1) set of basket cleaning brushes • One (1) Solenoid valve rebuild kit • Five (5) Endless bag cartridges
3	2	**RPPS Control Panel** Including: • Enclosure, NEMA 4X Stainless Steel • Main Disconnect, w/ Through Door Handle • VFD, Sq.D Altivar 312 and CB Branch Circuit Protection [2HP - 480VAC Max, Screen] • Control Power Transformer, 480-120VAC w/ branch circuit protection • Air Conditioner, NEMA 4X w/ Panel Heater • TVSS, 120VAC • Programmable Logic Controller, Allen-Bradley CompactLogix, with Required IO and Ethernet

		• Operator Interface Unit, Allen-Bradley Panelview Plus 600 Series 6 • Circuit breakers, 120VAC • Pilot Lights, LED Type, [As Required] • Push Buttons, [As Required] • Selector Switches [As Required] • Control Relays • Terminal Blocks • Dry Contacts • UL Listed / Labeled • Pressure Sensor w/25' cable • 7-hole, NEMA7 LCS (Screens)
4	1	**Manufacturer's services** Including: • One (1) trip, Three (3) days total onsite to inspect the final installation, supervise initial start-up and operation and to train operating personnel in the proper operation and maintenance of the system. • Additional services are available on a per diem rate upon request

Pricing:

ITEM	EQUIPMENT	Price
1	**ROTAMAT Fine Screens RPPS**	**Included**
2	**RPPS Standard Spare Parts**	**Included**
3	**Dual RPPS Control Panel**	**Included**
1-3	**Machine Subtotal (does not include submittals, shop drawings, Freight, or Manufacturer services)**	**$262,919**
4	**Manufacturer's Services and Freight with tax for Imperial CA (8%)**	**$23,544**
1-5	**TOTAL (without submittals)**	**$271,463**
6	**Submittal cost Bid Item B**	**+$15,000**
7	**Complete bid total**	**$301,463**

Notes:

1. All electrical interconnections, wirings, junction boxes and terminations between the equipment and electrical components are to be provided by installing contractor.

2. All valves, elbows, filter screens for connections, and all piping to and from the equipment is to be supplied by the installing contractor.

3. Any Item not specifically listed above is not considered part of this scope of supply. Please contact our representatives listed above for further clarification.

4. Additional programming software and spare parts for the controls systems are not included in this scope of supply unless stated otherwise. These items are available for an additional cost adder upon request.

Terms and Conditions
The proposal is dependent on customer's acceptance of the attached Huber Technology, Inc. Standard Terms and Conditions.

Special Information and Exceptions

- Price does not include any unloading or any applicable fees or taxes (Local, Federal, or Final Destination)
- Prices are in U.S. Dollars unless noted otherwise
- Freight is delivered with duty paid (D.D.P.) to Jobsite
- Price does not include installation or building modifications
- Price quotation is valid for 60 days from the date of this proposal. After expiration of validity Huber reserves the right to adjust pricing to take into account any significant increases in material costs such as steel, stainless steel finished products, stainless steel coil, etc.

Terms of Payment (all payments net 30 days)

- Shop Drawings-5%
- Delivery of All Equipment to the Project Site-70%
- Submission of Installation Certificate to the City of Imperial-10%
- Successful Equipment Start-Up, Test, and Training-10%
- Final Payment (35 days after the City of Imperial files Notice of Completion)-5%

Submittals
Huber Technology will provide documentation to the customer per the following schedule:

- Five (5) copies or the quantity stipulated in the equipment specification of submittal shop drawings 4-6 weeks after acceptance of a written purchase order.
- Three (3) copies or the quantity stipulated in the equipment specification of Huber Technology O&M manuals prior to equipment start-up.

Shipment
Huber Technology will maintain the following schedule:

- Submittals 3 weeks after acceptance of a written purchase order, Stamped P.E. calcs may have to follow approval of notification to proceed with manufacturing due to accelerated schedule.
- Equipment delivery 20 weeks after approved submittals or notice to proceed.
- O&M manuals prior to equipment start-up.
- For any delays in delivery which are beyond Huber's responsibility, a finance charge of 1.5% of the contract value per month will be due and payable to Huber.

Accessories
This proposal includes only those items specifically mentioned in the equipment descriptions. Any items which may be necessary for the operation of the equipment, but are not specifically mentioned, such as motors, drives, controls, or supports, are to be supplied via additional quotation separate from this offering.

Abrasion or Corrosive Materials
All of Huber's machines and systems are manufactured from 304 grade stainless steel. The environment or materials the equipment may be exposed to may be abrasive or corrosive. This

proposal makes no representation or warranties concerning the service life of the equipment against such abrasion or corrosion. The concentration of chloride and hydrogen sulfide (H2S) in the equipment operating environment shall be kept below the following values:

- Chloride < 200 mg/l
- Hydrogen sulfide H2S < 6 ppm

Machines made from 316 grade stainless steel are available for a price adder for extremely harsh operating environments.

Purchase Orders

All purchase orders are to be faxed or mailed to:

Huber Technology, Inc.
9735 Northcross Center Court, Suite A
Huntersville, NC 28078
Phone: (704) 949-1010
Fax: (704) 949-1020

All purchase orders are subject to acceptance by Huber Technology, Inc.

Warranty

Huber warrants the equipment and components furnished will be free from defects in workmanship and materials and perform the general process function intended solely under the operating conditions defined by Huber for a period of (a) 12 months from completion of installation, start-up or owner acceptance of the equipment, or (b) 18 months from the date of delivery to Purchaser, whichever date comes first.

Exclusions

- Financing
- Cranes and/or lifting devices
- Unloading and/or storage of equipment on jobsite
- Local, State or Federal taxes or fees
- Foundation design and engineering (Huber will furnish equipment drawings and data)
- Utilities for erection, installation and operation
- Gauges and instrumentation not specifically described in Huber scope of supply
- Interconnecting wiring, conduit, piping, tubing, valves, fittings, etc. between the equipment and other equipment and/or control devices and control panel.
- Tools, oil, grease, grease gun, dumpster(s), or bins(s).

Project Management

Huber will appoint a Project Manager for the duration of the contract. Project Management services are included in this package and are as follows:

- Provision of a complete critical path project schedule for Huber equipment
- Coordination with Huber manufacturing on materials procurement and fabrication to and with Huber shipping/logistics to ensure Huber commitments are maintained.

Erection, training and Start-up assistance

A certified Huber Service Technician can normally be at the jobsite within two (2) weeks after customer's request to Huber for equipment start-up and commissioning assistance. Huber will provide additional erection and start-up supervision, which is not specifically included in the scope of our supply at the purchaser's request. For such additional services Purchaser shall pay $1,000.00 per day plus expenses, for eight hours per day.

- At the request of the purchaser, overtime service will be provided at a rate of 1.5 times the regular rate for weekdays, and 2.0 times the regular rate for weekends.
- Expenses are defined as the costs of travel from Huber's location to the point of installation and return; together with accommodation and living expenses during the period of field service.
- Charges for all time involved will be invoiced, including delays which are beyond Huber's control.

Equipment Standard

Any deviations from the Huber standard mechanical and electrical specifications must be discussed with the Purchaser and agreed upon. Huber reserves the right to charge adders to the equipment price for any non-standard mechanical and electrical components required by the Purchaser and not explicitly stated in Huber's scope of supply.

Shop painting

Gears and motors will receive three layers of painting, two layers of primer and a finishing layer with synthetic resin varnish.

Huber Technology, Inc.
Terms and Conditions of Sale

1. **GOVERNING TERMS**: The Terms and Conditions shall exclusively govern the sale of equipment, components and related services by Huber to Purchaser. Acceptance of Huber's offer or counteroffer by acknowledgement is expressly limited to these terms and conditions and those stated in any Huber proposal or acknowledgement. Huber hereby gives notice of objection to any different or additional terms which may be proposed or contained in any document forwarded by Purchaser. No other terms or conditions or modification of these terms shall be binding upon Huber unless specifically accepted in writing by an authorized representative of Huber. Merely signing a purchase order or other document as a condition of payment shall not be deemed a specific acceptance of terms therein by Huber. The terms and conditions in a Huber order acknowledgement take precedence if inconsistent with those stated below.

2. **PRICING:** Unless otherwise stated therein, prices quoted are valid for acceptance within 60 days of the date Huber's proposal. If purchaser causes or requests delays in manufacture or shipment beyond 6 months from acceptance of purchase order, Huber shall have the right to price increase based on any actual escalation in labor, material, overhead, and component costs. Huber also reserves the right to charge purchaser for any reasonable storage costs caused by such delays.

3. **PAYMENT TERMS:** Huber will extend credit to Purchaser and accept payment of the full net invoice within 30 days of receipt by Purchaser, subject to a satisfactory credit check and approval by the Huber Credit Department. Should any investigation reveal grounds for insecurity of payment at any time, Huber reserves the right to demand payment terms which adequately assure Huber of Purchaser's expected payment or to withhold shipment until such terms are reached or payment is received. Late payments shall be subject to a 1.5% per month finance charge.

4. **RETAINAGE:** Retainage, in any case, is limited to 10% of the contract value and is due upon completion of the terms of the contract.

5. **TAXES:** Purchaser shall pay directly or reimburse Huber for payment of any and all applicable sales, use, excise or other taxes. Purchaser is responsible for and bears the risk of establishment of a valid exemption from any tax, and shall indemnify, defend, and hold Huber harmless from any loss, cost or expense related to exemptions.

6. **SHIPPING:** All equipment and components will ordinarily be shipped in one lot by the lowest cost method at the discretion of Huber. Additional shipments requested by Purchaser shall be subject to additional shipping and handling charges. All shipments shall be Delivered Duty Paid (DDP) to the jobsite. Delivery by the freight carrier to the Purchaser shall transfer to Purchaser the risk of loss or damage and the risk of meeting Purchaser's project schedule.

7. **DELIVERY DATES:** All delivery dates are approximate and subject to revision due to engineering approval delays, availability of materials and components, and other causes beyond Huber's control, including unusual weather conditions, acts of God or government, accidents, labor dispute (including lockouts), or damage or breakdown at Huber plant. Huber will use its best efforts to meet promised delivery dates, but under no circumstances shall Huber be liable for any direct, or indirect, consequential, incidental, liquidated or other damages for delay in delivery. Purchaser will notify Huber within 30 days after order acceptance of the scheduled delivery date. If Purchaser does not notify, a delivery date of 6 months after order acceptance and/or approval of submittals is agreed. For any delays by Purchaser after commencement of manufacturing, a finance charge of 1.5 % per month of the contract value will be assessed to Purchaser.

8. **GOODS ACCEPTANCE:** It is Huber's intent to deliver complete orders in good condition to the final destination dictated by the Purchaser. All equipment and components delivered to the receiving location must be duly inspected upon receipt. Any visible damages must be noted on way-bill and followed up with a full inspection within a period of two weeks from delivery date. If a written report is not submitted to Huber within this period it is assumed that the equipment was received in good condition, meets the specifications of the purchase order, and is duly accepted by the Purchaser.

9. **FIELD SERVICE:** "Field Service" refers to the services of a Huber factory-trained representative at the site of end-use for initial installation, inspection, start-up observation and operator training. "Field Service" refers also to any subsequent investigations of warranty issues, operational difficulties, Purchaser complaints, or requests for post-warranty service. Purchaser acknowledges that Huber Field Service representatives shall

make all arrangements necessary with labor unions for their presence on the site. No contractual warranty or indemnity relating to Field Service is extended by Huber, nor are its Field Service representatives authorized to bind Huber with any oral representations or statements in conflict with or addition to the governing contract terms or any manual or instructions provided by Huber. This paragraph shall apply to any and all initial and subsequent Field Service provided by Huber relating to the equipment sold to the Customer. Any field service work performed at site after expiration of the initial warranty period is warranted for 60 days after the work has been completed.

10. **CANCELLATIONS:** Purchaser may not cancel or terminate its order without the written consent of Huber and payment of Huber's associated costs, effort expended, and loss of anticipated profit.

11. **GOVERNMENT STANDARDS:** Huber's equipment will be designed and manufactured to comply with federal government occupational safety, noise, sanitation and health standards. The purchaser is solely responsible for compliance of the equipment and its operation with any state or local laws, codes, ordinances, or regulations, unless otherwise specified by Huber in its proposal.

12. **LIMITED WARRANTY:** Huber warrants that the equipment and components furnished will be free from defects in workmanship and materials and perform the general process function intended, solely under the conditions defined by Huber for a period of (a) 12 months from completion of installation, start-up or owner acceptance of the equipment, or (b) 18 months from the date of delivery to Purchaser, whichever date comes first. Huber will replace, modify or repair,
at its sole option, any such defective component or equipment at no charge provided that Huber is notified promptly in writing of any claimed defect. If requested by Huber, any such defective part or component shall be returned to Huber, freight prepaid. Huber will provide on-site Field Service when reasonably assured of payment therefore if this warranty does not apply or when such service is required in its judgments. This warranty does not apply to any defect or malfunction arising out of failure to store, install, operate or maintain the equipment in accordance with instructions by Huber. Warranty shall be voided for any misuse of equipment; operation under conditions other than those defined by Huber in its operation and maintenance (O&M) manuals for said equipment, or gross operator negligence. Any unauthorized modification or alteration of the equipment or repair or replacement of components may void this warranty, at the sole option of Huber. For any billable repairs completed outside of the initial warranty period, a 60 day guarantee on work performed and parts supplied will apply.

    THIS WARRANTY IS EXCLUSIVE AND IN LIEU OF ANY OTHERS, INCLUDING IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

13. **EXCLUSIVE REMEDIES:** Purchaser acknowledges that its sole and exclusive remedies for breach of the Limited Warranty shall be replacement or repair by Huber of any defective part or component, and payment of the reasonable out of pocket costs incurred in connection with replacement or repair if such costs are approved in advance by Huber, or refund of 80% of the purchase price if the equipment cannot be repaired or replaced. This remedy excludes any other consequential, incidental, special or other form of damages. It also excludes any extraordinary costs for removal or re-installation of Huber equipment, such as crane rental, structural alteration, or demolition, which are necessitated by factors over which Huber has no control such as building design or configuration.

14. **LIMITATION OF LIABILITIES:** Huber shall not be liable in contract, tort or otherwise any form of consequential, incidental, punitive, or liquidated damages, loss of use, cost of cover, extraordinary removal or re-installation costs, or governmental fines or penalties arising out of failure of its equipment to perform or be free from defects, late shipment, errors or omissions in Field Service or any other breach or failure to perform whatsoever. Under no circumstances shall Huber's total liability of any type exceed 10% of the purchase price.

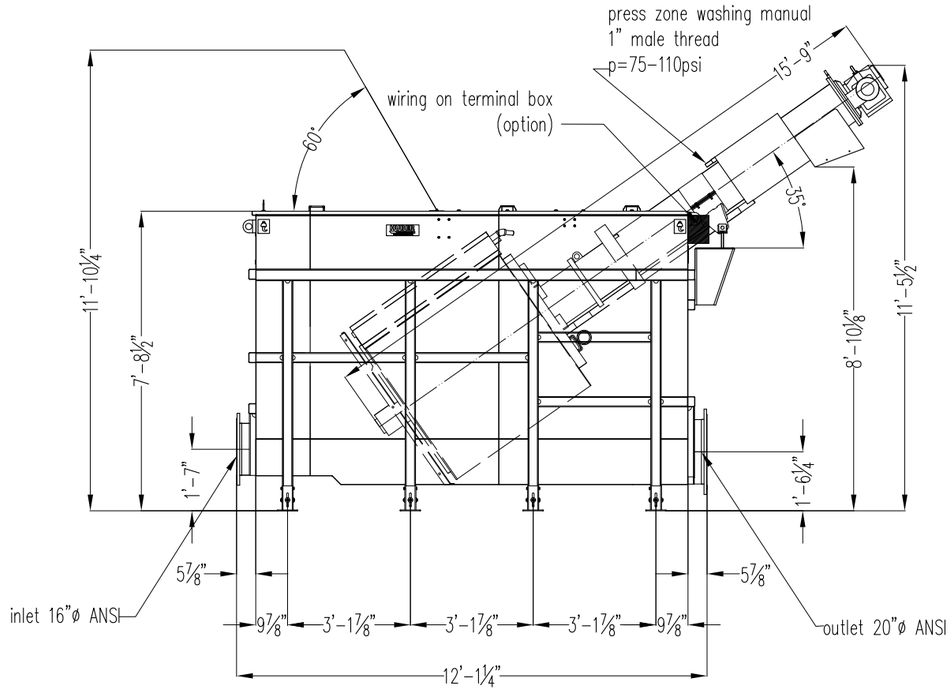
15. **INDEMNIFICATION:** Huber shall indemnify Purchaser from and against any claims, suits, or demands by others for property damage, personal injury or death arising out of the sole fault or neglect of Huber in the design or manufacture of its equipment, or for damages for patent infringement arising solely out of equipment or components designed and supplied by Huber. This indemnity obligation shall be void unless Purchaser provides prompt written notice to Huber of any occurrence which may require indemnification. Purchaser permits Huber to assume the defense and settlement of any claim, suit or demand, and Purchaser shall cooperate in all respects with Huber in defense and settlement.

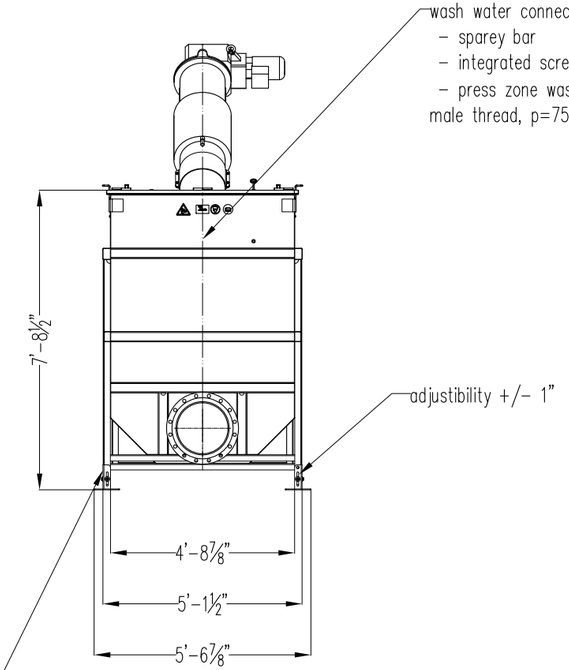
16. **TITLE:** Notwithstanding delivery, installation or start-up, title to all equipment furnished shall remain solely with Huber until the full purchase price is paid by Purchaser. Until such time, Huber may enter the premises where such equipment is then located and repossess and remove such equipment by any lawful means as this is the property of Huber Technology. Purchaser agrees to do all acts deemed necessary or desirable or requested by Huber to maintain Huber's rights in, and title to such equipment.

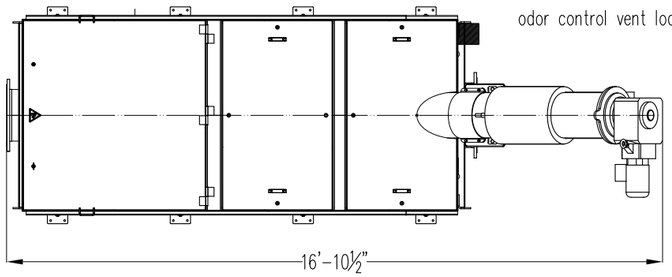
17. **GOVERNING LAW:** The transaction between Purchaser and Huber shall be deemed to be made under and its terms shall be governed by, construed and enforced in accordance with the laws of North Carolina without regard to its conflict of laws provisions.

18. **ARBITRATION:** Any controversy or claim arising out of or relating to this contract or its breach shall be settled by arbitration conducted in Huntersville, North Carolina in accordance with the Construction Industry Arbitration Rules of the American Arbitration Association and North Carolina law and judgment on the award rendered by the arbitrator(s) may be entered in any court of competent jurisdiction.

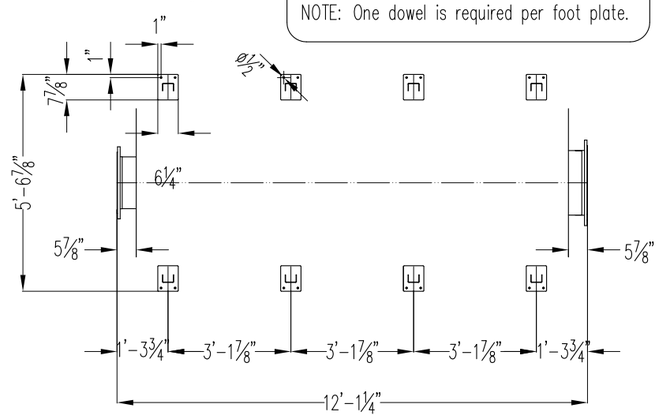
19. **ASSIGNMENT:** Purchaser shall not assign any of its rights or obligation without the express prior written consent of Huber. Such consent may be withheld, delayed or conditioned at Huber's sole discretion. The transaction between Purchaser and Huber shall not be construed to confer or create a third party beneficiary relationship with any other entity.





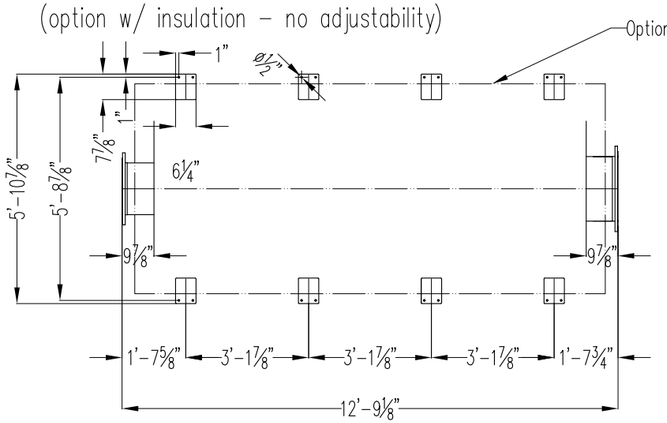


DETAIL: Drilling points



NOTE: One dowel is required per foot plate.

DETAIL: Drilling points
(option w/ insulation – no adjustability)



NOTE: height of support legs cannot be adjusted if container is frost protected

Note:
If the machine is equipped with frost protection some dimensions may differ from those shown (option).

Note:
Firm standing of the plant is only guaranteed after dowelling

Dimensions are for reference only!
For binding dimensions please refer to the final installation drawings

Rev.	Modification	Date	Name
0	converted	11/20/14	mn

HUBER TECHNOLOGY
WASTE WATER Solutions
9735 NorthCross Center Court, Suite A, Huntersville, NC 28078 Tel: 704-949-1010

RPPS 1400 (TYPICAL)
Perforated plate screen in container

Fig No.		Scale:
1/1	IMPERIAL, CA	1/4" = 1'–0"

Project No.	Dwg No.
	RPPS_1400_2014_TANK.dwg

Section III: Completed Proposal & Bid Documents

BIDDING SHEET #1 – TANK MOUNTED FINE SCREENS WITH INTEGRAL SCREENINGS WASHING

The undersigned hereby proposed to furnish and deliver the following items of equipment to the City of Imperial, all in strict accordance with the attached and/or incorporated Special Requirements, Technical Specifications, and Drawings, for the following Bid prices:

Bid Item A - Furnish and deliver two (2) fine screens with integral screenings washing and as detailed in the technical specifications with all appurtenances and patent and/or license fees for a complete system, all for the lump sum of (Includes Bid Item B, required to sell machine)

$ 301,463 * (Figures)

$ three hundred and one thousand, four hundred and sixty-three and NO/100 (Written)

Bid Item B - Firm Price for the supply of the manufacturer's shop drawings:

$ 15,000 * (Figures)

$ fifteen thousand and no/100 * (Written)

Bid Item C - Firm Price for the supply of the manufacturer's recommended spare parts not included in the price above (attach list showing individual components and costs):

$ N/A * (Figures)

$ N/A * (Written)

* **The above prices include any amount payable by the City of Imperial for taxes by reason of this contract.**

Suppliers must include **all** proposed costs for performance under the contract. Suppliers must provide all personnel and other resources required to complete the contract. Suppliers are solely responsible for start-up and transition expenses. Any costs that cannot be determined, based on the available information, should be indicated and explained.

Does Proposed Equipment meet **All** of the Specifications? NO
If No, please make notations on Exceptions sheet.

BIDDER: Huber Technology, Inc.

AUTHORIZED SIGNATURE: [signature]

TITLE: President

NOT BIDDING

BIDDING SHEET #2 – MICROSCREEN SYSTEM

The undersigned hereby proposed to furnish and deliver the following items of equipment to the City of Imperial, all in strict accordance with the attached and/or incorporated Special Requirements, Technical Specifications, and Drawings, for the following Bid prices:

Bid Item A - Furnish and deliver one (1) microscreen system to provide as detailed in the technical specifications with all appurtenances and patent and/or license fees for a complete system, all for the lump sum of

$ N/A *
(Figures)

$ _____ *
(Written)

Bid Item B - Firm Price for the supply of the manufacturer's shop drawings:

$ N/A *
(Figures)

$ _____ *
(Written)

Bid Item C - Firm Price for the supply of the manufacturer's recommended spare parts not included in the price above (attach list showing individual components and costs):

$ N/A *
(Figures)

$ _____ *
(Written)

* **The above prices include any amount payable by the City of Imperial for taxes by reason of this contract.**

Suppliers must include **all** proposed costs for performance under the contract. Suppliers must provide all personnel and other resources required to complete the contract. Suppliers are solely responsible for start-up and transition expenses. Any costs that cannot be determined, based on the available information, should be indicated and explained.

Does Proposed Equipment meet **All** of the Specifications? _____
If No, please make notations on Exceptions sheet.

BIDDER: _____

AUTHORIZED SIGNATURE: _____

TITLE: _____

VIII. PAYMENT SCHEDULE

Payment for the work will be based on the Bid price and will be paid in accordance with the following Delivery Schedule.

Item	Percent of Bid Price*
Shop Drawings	5%
Delivery of All Equipment to the Project Site	70%
Submission of Installation Certificate to the City of Imperial	10%
Successful Equipment Start-Up, Test, and Training	10%
Final Payment (35 days after the City of Imperial files Notice of Completion)	5%

*Excludes cost of service engineer time, which will be paid as it is performed.

Award of Construction Contract and Start of Construction for the project are scheduled to occur January 2015. All bid items that are awarded as part of this contract will be awarded and managed by the City as "Owner Furnished Equipment". The proposed startup and operation of the project is scheduled to commence in May 2015. It is not the intent to withhold the Equipment Supplier's payment due to installation problems that are beyond his control.

IX. GENERAL PROPOSAL INFORMATION

A. Contract Manager

Name: Brian Knoll, PE
Office Phone Number: (951) 200-8601
E-Mail Address: Brian.knoll@webbassociates.com

B. Technical Literature

Detailed descriptive literature for all equipment being offered must be included with the proposal. Such literature must provide information on electrical wiring needs, space requirements and all technical data required for a full evaluation. **Failure to provide technical literature may be cause for rejection of proposal.**

C. Preventative Maintenance Schedule

The manufacturer's recommended preventative maintenance schedule for each piece of equipment proposed must be included with your proposal.

D. Owner's Manual

Supplier shall supply an operator's manual with each unit at time of delivery.

EXCEPTIONS

Please state below any and all exceptions that you are taking to any portion of this Request for Proposals. If not addressed below, the City of Imperial then assumes that the vendor will adhere to all terms and conditions as contained in the proposal document.

Bid Item #1

- PART 1, A - Huber is not providing ancillary supports, process piping valves, elbows, etc. that are not standard, directly welded or machined to our tank. Huber will provide a 16" ANSI INLET, A 20" ANSI outlet, AND two (2) 4" ANSI ODOR control CONNECTIONS (WITHOUT ELBOWS OR FILTER SCREENS)

- PART 2, 2.3, E.

  - 3. Huber will provide 20" ANSI OUTLET AS IS Huber STANDARD, IN ORDER TO NOT Hydraulically Impede THROUGHPUT WITH AN INCREASED FLOW CONSTRICTION AT THE OUTLET

  - 4. Huber will not provide ODOR control inlet screens THIS IS not something that Huber NORMALLY Provides, AND THUS COULD NOT ASSURE WHAT WE MIGHT HAVE PROVIDED WOULD MEET THE CUSTOMERS Specific REQUIREMENTS.

REFERENCES

Please list below name of business, address, telephone number, and contact person.

1. Lake of the Pines, CA - 10803 Rimia Way, Auburn, CA 95602
   ~~Dave Commons~~ Wayne Robinson (530) 268-1312

2. City of North Las Vegas WRF - 2580 Betty Lane, Las Vegas, NV 89156
   Dave Commons (702) 633-1101

3. Leoni Township, MI WWTP 8401 Page Avenue,
   Michigan Center, MI 49254 Tom Prescot (517) 522-3092

4. Lott Clean Water Alliance 500 Adams Street NE,
   Olympia, WA 98501-6911 Clint McDaniels (360) 664-2333 x1106

5. _____

SIGNATURE SHEET

My signature certifies that the proposal as submitted complies with all Terms and conditions as set forth in RFP.

My signature also certifies that this firm has no business or personal relationships with any other companies or persons that could be considered a conflict of interest or potential conflict of interest to the City of Imperial, pertaining to any and all work or services to be performed as a result of this request and any resulting contract with the City of Imperial.
I hereby certify that I am authorized to sign as a Representative for the Firm:

Name of Firm: Huber Technology, Inc.

Address: 9735 Northcross Center Court, Suite A, Huntersville, NC 28078

Fed ID No.: 582462455

Name (type/print): Henk-Jan van Ettekoven

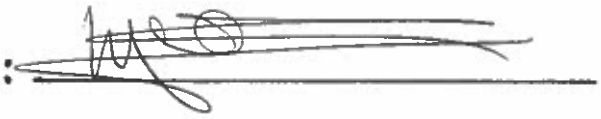
Title: President

Telephone (704) 949-1010

Fax No. (704) 949-1020

Date: 11/19/2014

To receive consideration for award, this signature sheet must be included with the bid, as it shall be a part of your response.

Signature: 

Section IV: Operability

OPERATION AND MAINTENANCE COSTS (Life-Cycle-Costs)

ROTAMAT Fine Screen, RPPS 1400-3 (EACH)

Parameters

Energy cost ($/kW-hr)	0.10
Water cost ($/m³)	0.28
Labour cost ($/man-hr)	
Plant operating days per year	365

Energy Costs

Description	rating per hour	consump. per hour	daily operation hour	Annual cost $
Screen drive motor operating at 70 % flp [kW]	1.50	1.05	2.50	95.81
Plant reuse water (no cost)	8.37	8.37	2.50	
Total annual cost				**95.81**

flp = full load power

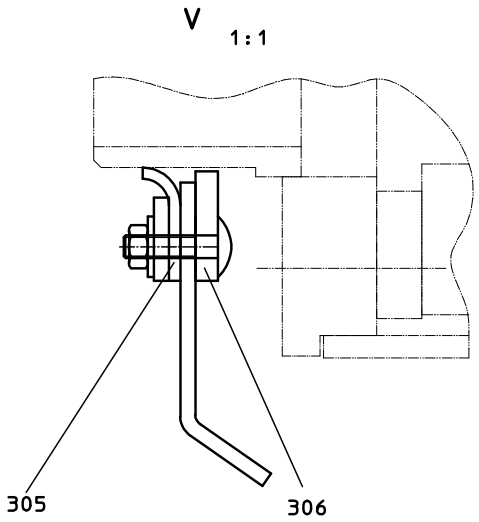
Maintenance Costs

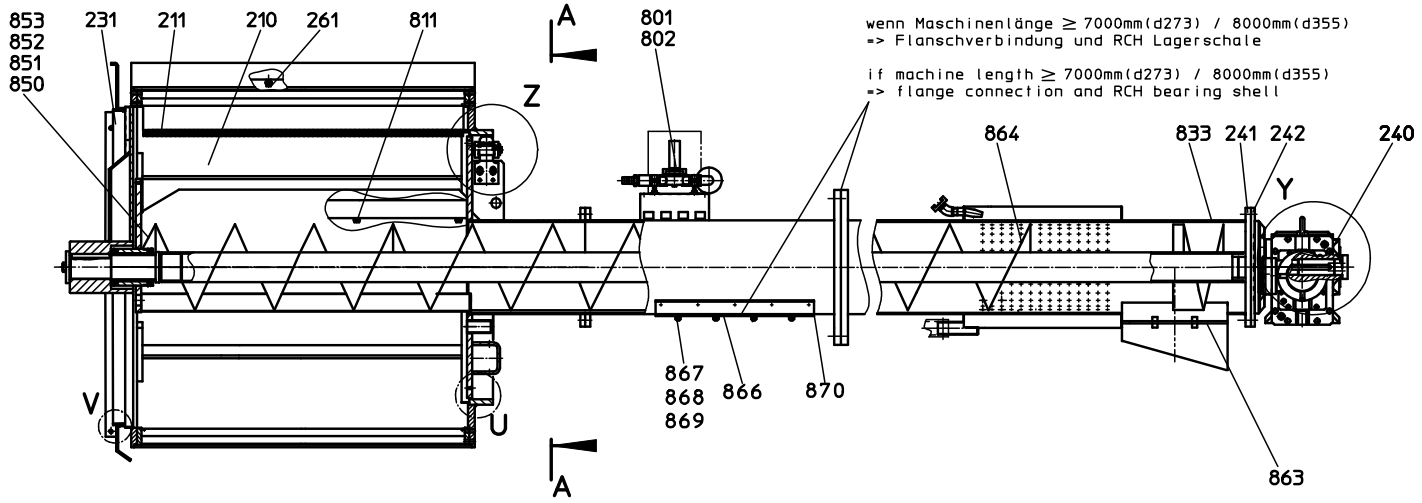
Description	combined work (CW)	Frequency per year	Man-hours	Spares cost $	Annual cost $
Annual inspection		1.00	8.0		0.00
Replace rollers	CW	0.20	4.0	463.50	92.70
Replace bearing	CW	0.20	6.0	1622.20	324.44
Replace brushes	CW	0.20	2.0	588.00	117.60
Replace screw flight hopper zone)	CW	0.20	1.0	101.00	20.20
Replace screw flight (press zone)	CW	0.20	1.0	255.00	51.00
Total annual cost					**605.94**

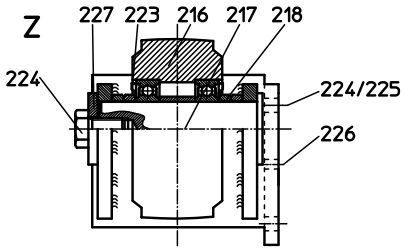
Spares Costs (spares ref. numbers should be read in conjunction with Huber drawing 011_000013)

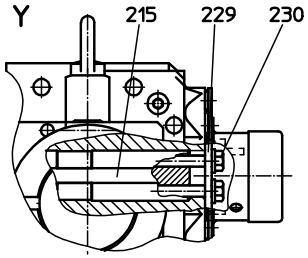
Description	Unit cost $	Quantity	Total cost $
Replace rollers			
216 roller (508603) (set)	463.50	1	463.50
Total			**463.50**

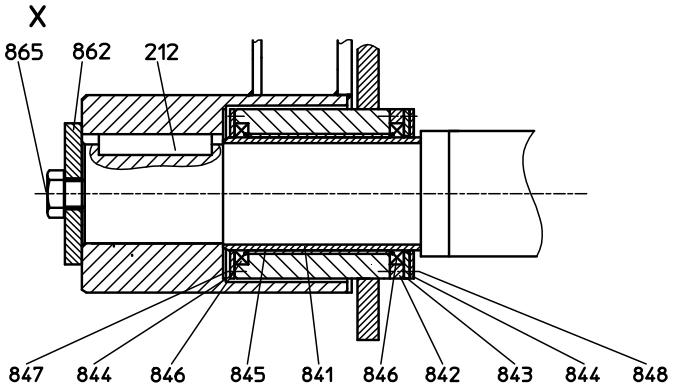
Optional: PU-Dichtung
Option: polyurethane-seal

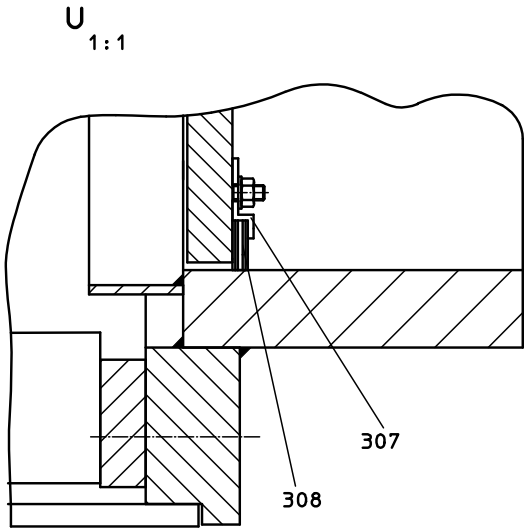


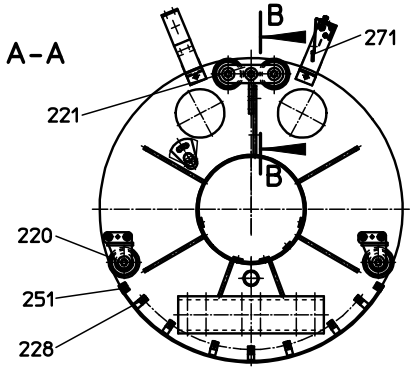


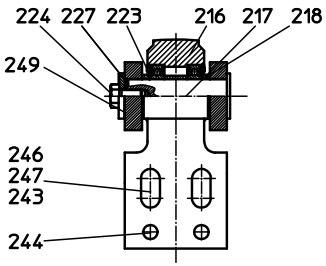












Pos. Item	Menge Quantity	Bezeichnung Specification	Werkstoff/Lieferant Material/Supplier	Bemerkung Annotations

Technische Aenderungen vorbehalten / Subject to modification

ISO 2768-mk

HUBER TECHNOLOGY
D-92334 Berching / Tel.:08462/201-0

Ver-sion	Aenderung Modified	Datum Date	Name		Datum/Date	Name
				Bear./Rev.	22.10.2002	Lj
e	Ueberarbeitet	15.02.19	str	Gepr./Appr.	II	II
				Norm.		

Massstab/Scale: -

Ro2 1400-1800 Siebanlage

Ro2 1400-1800 Wedge Section Screen

Projektbez.: Project Name: Ersatzteilzeichnung - spare part drawing

Projekt Project	Art.-Code Item Code	Blatt Sheet
-	011_000014__	-/-

ROTAMAT Fine Screen, RPPS 1400/3 (EACH)

Spares Costs - continued

Description	Unit cost $	Quantity	Total cost $
Replace bearing			
841 stainless steel bushing (15667)	520.00	1	520.00
842 stainless steel ring (501125)	294.00	1	294.00
843 guard ring (501127)	27.00	1	27.00
844 guard ring (500244)	71.00	2	142.00
845 journal bearing (700801)	177.00	1	177.00
846 oil seal (710798	229.00	2	458.00
847 counter sunk screw (702866)	0.28	6	1.68
848 counter sunk screw (702870)	0.42	6	2.52
Total			**1622.20**
Replace brushes			
211 brush (506104)	357.00	1	357.00
251 brush (506085)	231.00	1	231.00
Total			**588.00**
Replace screw fligth (in hopper)			
850 screw flight end plate (501684)	101.00	1	101.00
Total			**101.00**
Replace screw flight (press zone)			
864 screw flight (503786)	255.00	1	255.00
Total			**255.00**

Operating Instructions

ROTAMAT® Perforated Plate Screen RPPS

HUBER TECHNOLOGY, Inc.

9735 NorthCross Center Court STE A
Huntersville, NC 28078

Original operating instructions
HHUSA Version 03/13

NOTICE

This manual is part of the machine and must be available for the operators any time.
The safety instructions must be observed.
In case of selling the machine the manual must be included.

1 Product Specification

1.1 Intended use

The equipment is intended to separate solids from wastewater, and compact and wash out separated screenings – depending on the equipment version.

For solids separation the machine is **applied**:

- in wastewater treatment plants (municipal and industrial)
- for industrial process and partial flows

The intended use also includes:

- Observance of the start-up, operation and maintenance conditions as set out in these operating instructions
- Taking foreseeable malpractice into account
- Operation by **skilled workers** only (who are familiar with the correct procedures and know the dangers)

⚠ WARNING

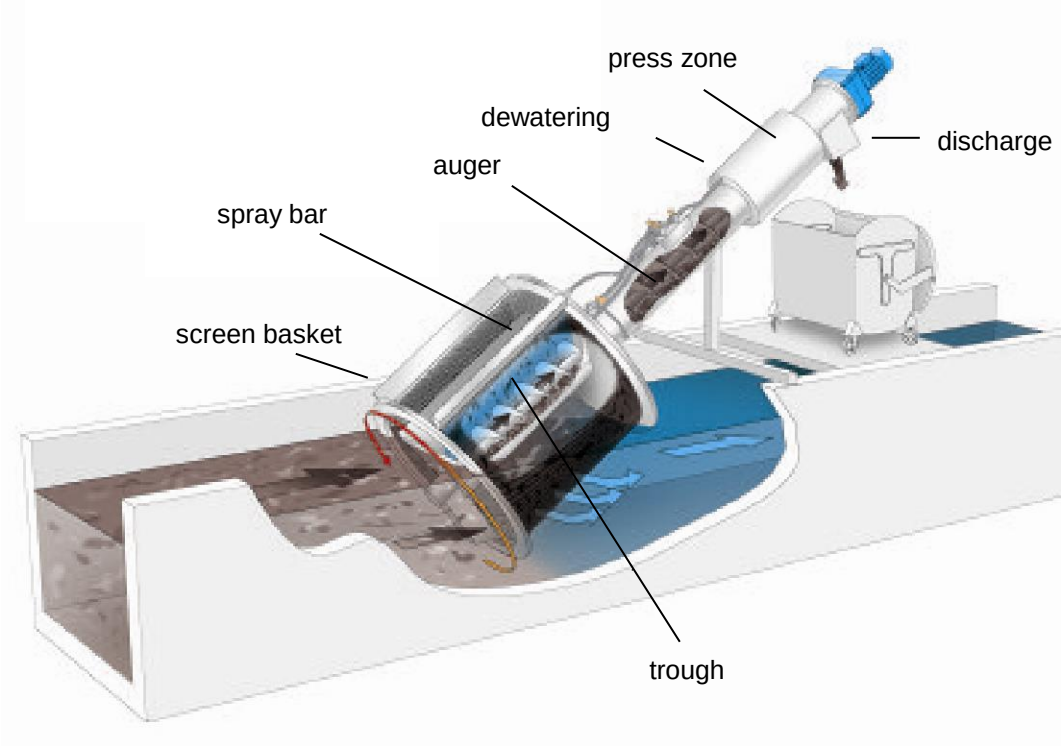
The machine is intended exclusively for the above specified use.
Any additional use or rebuilding of the equipment without prior written approval by the manufacturer does not comply with the intended use.
The manufacturer will not assume liability for consequential damage. The operator alone will bear the risk.
Do not start up the machine before there has been ensured that all safety devices are completely mounted and operable, and that the plant into which the machine may be incorporated complies with the rules.

The machine is suitable to be used in Class 1 Division 2 areas.

1.2 Definition of terms for machine components

Definition of terms:

Terms for equipment components according to the following drawing



The stationary part of the screen comprises (from top to bottom):
- Baffle plate in the channel
- Screen basket
- Trough with perforated plate
- Base plate
- Rising pipe with guide bars
- Support
- Press zone, press liquor collection chamber, press water return
- Screenings discharge
- Gear motor

These components form the machine body to which optional equipment can be attached.

The rotating part of the screen comprises (from top to bottom):
- Screw with central shaft and flights, upper and lower pivot
- Screen basket with guide rollers

These components form a rotating unit which is driven by a gear motor with hollow shaft fitted at the upper end of the machine.

1.3 Specification of machine components

Screen basket
The screen basket is a precisely welded construction. The perforated plate surface which retains the screenings is welded onto a supporting structure. Spirals of metal strips on the inner drum surface transport the screenings upwards and drop them into the trough. A brush fitted also to the inner drum surface cleans the trough edge as the basket rotates. The screen basket is on the bottom end fixed to the screw by means of a strut, while several rollers support the drum on the upper end. A *brush or PU seal* on the baffle plate seals the gap between the screen basket and channel.

Spray bar:
The spray nozzle bar is fixed to the base plate and baffle plate by means of adjustable holding angles. The nozzles are arranged at a certain angle to achieve an improved screen basket cleaning efficiency.

Cleaning brush of screen basket:
The cleaning brush is fixed to the base plate and baffle plate and adjustable by means of elongated holes. The brush can be fold back to facilitate cleaning.

Trough:
The screen drum collects the screenings and drops them into the trough. The bottom of the trough is perforated to enable water or wash water from screenings washing to run off. The front plate is the bottom end of the trough where the lower screw bearing is installed.

Rising pipe:
The rising pipe is the central and stationary component and therefore has a stable design:

- Internal guide bars prevent that the screenings turn with the screw while the screw transports them out of the trough and conveys them upwards.
- The base plate on the rising pipe supports the screen basket.
- The compaction chamber dewatering the screenings is positioned at the upper end of the conveyance area prior to the screenings discharge. In this area the rising pipe is perforated and encased by the press water collection chamber.
- A cover in the rising pipe allows access to the compaction chamber. Access to that cover is possible by removing the whole press water collection tank or the inspection cover attached to the press water collection tank.
- The screenings discharge assembly has two safety flaps which prevent that someone unintentionally puts his hand into the discharge.
- The support of the screen is available as a simple leg or an A-frame support, as required, and is clamp-mounted on the rising pipe.

Auger:

- The lower radial bearing is in the trough front plate. The bearing bushes are secured by oil seals and a cover plate.
- The screw shaft causes the screen basket to rotate via the strut connection.
- The top and bottom shaft pinions are secured by adjusting springs.
- A stainless steel sleeve on the bottom shaft pinion is provided for wear protection.
- The screw flights have a different design and pitch and end in front of the press zone.
- One oppositely directed flight with doctor blade at the upper screw end supports screenings discharge.

Gear motor:
The gear motor is directly flanged to the top of the rising pipe. The torque is transferred onto the shaft pivot by means of an adjusting spring connection. The gear motor has also the function of the axial and upper radial bearing of the screw.

1.4 Functional description

The screen is installed in a tank or the channel at an angle of 35° *(30° for XL version with extended drum)*. The wastewater flows into the perforated plate drum through the open front side. The solids contained blind the screen surface producing a mat of screenings that has the effect of a filter and retains also smaller solids. The special perforated plate design ensures that screenings adhere only to the drum and do not clog the screen surface. Due to the blinded screen the upstream water level rises, the machine is started by level control. The screenings are transported upwards by drum rotation and dropped into the centrally arranged collecting trough by means of a brush and spray nozzle bar. While the screw, that is connected with the screen basket, conveys the screenings from the collecting trough into the closed rising pipe, the integrated screenings washing system (optional equipment) washes out the soluble particles which are then returned into the wastewater flow. During their transport through the screw the screenings are compacted, washed and dewatered. The dewatered screenings are discharged into a container or any other conveying system. The press liquor collects in the press liquor collection chamber and flows back through the transparent press liquor return hose into the screen basket.

Optional additional equipment:

- An integrated screenings washing system ensures washing of the screenings and thus return of biologically degradable substances into the clarification process.
- An automatic press zone washing system ensures fully automatic washing of the press liquor collection chamber and reduces cleaning work.
- A screenings bagging unit reduces odor annoyance in the screen building. The screenings bagging unit is attached directly to the screenings discharge. 295 ft (90 m) endless bags take in the discharged screenings.
- A screen basket cover can be supplied if required to meet local safety regulations
- A frost protection allows outdoor operation down to -13°F (-25°C). The rising pipe and the inlet tank are equipped with heating tape and insulation.

Supply limits:

Mechanical:

- Baffle plate in the channel with adjustable fixing angles
- Screenings discharge chute
- Lifting eyes on the machine:
- Wash water connection on rising pipe for screen basket cleaning, screenings washing and press zone washing assembly.

Electrical:

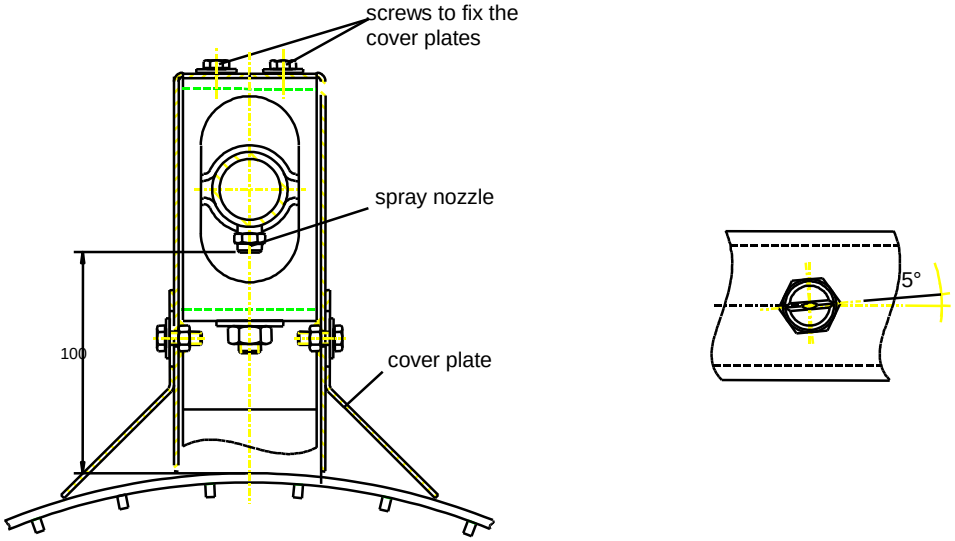
- Screws in the terminal box; the correct type of connection (star or delta) can be read from the identification plate.
- Terminal block inside the control panel

1.5 Functional description of components

1.5.1 Screen basket cleaning

Spray bar:
While the screen basket rotates through the spray water jet as it rotates forwards, screenings and feces are removed by means of the flat jet nozzles. Water supply is via a water strainer (200 micron / 80-mesh) controlled by a solenoid valve. The installation position of the spray nozzle bar is the 2 o'clock position on the baffle plate and base plate of the screen drum. The distance between the centre of the lowest spray nozzle and the holder must be approx. 9/10 inch (23mm). The flat jet nozzles produce a linear jet.

The spray bar cover plate is height adjustable and must be adjusted to prevent misting of spray water.

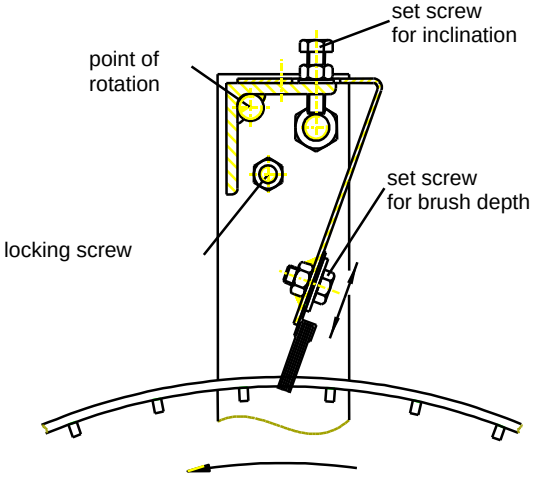


Spray bar on screen basket

Water supply:	See chapter 5.1.2
Operational water pressure:	min. 70 psi (5 bar) max. 100 psi (7 bar)
Water quality:	min 200 micron screened or filtered water

Brush:
Additional cleaning of the screen basket and removal of screenings and feces is achieved by means of a brush. The brush engages in the perforated plate forcing the screenings into the trough. The installation position of the brush is the 10 o'clock position on the baffle plate and base plate of the screen drum. The brush moves back as the basket reverses. To fold the brush back completely, it is necessary to remove the locking screw.

Settings:
Adjust the brush inclination to an angle < 90° between the brush and screen basket (see below drawing). Adjust the brush depth to ensure that the brush extends through the perforations.



1.5.2 Press zone

Press liquor collection chamber:
The screenings are dewatered in the press zone which is located on the upper end of the conveying section prior to the screenings discharge. In this area the rising pipe is perforated and encased by the press water collection chamber.

The press water collected in the press water collection chamber is discharged through the outlet hose into the channel / screen basket. Along with the water also sludge or feces are pressed out while the screenings are compacted, which might lead to clogging in the collection chamber and outlet hose. It may therefore become necessary to dismount the press liquor collection chamber.

⚠ WARNING

Switch off and lock the mains isolator prior to starting with dismantling!

Wear protective gloves!

How to proceed with dismounting/mounting the plastic chamber (size 780 - 1200):

- Dismount the outlet hose.
- Loosen the lateral screws with hexagonal recessed hole. Be careful to prevent that the washers cast into the plastic turn with the screws.
- Carefully remove the plastic half-shells.
- Pay attention to press the sealing strip into the provided groove. Make sure the sealing surfaces of the rising pipe are clean.
- Thoroughly lubricate the front sealing surfaces.
- Hand-screw the fixing screws with a maximum torque of 5 Nm. Attention: Do not use any screw locking mean!

Screens size 1400 and bigger have a stainless steel press liquor collection chamber that is welded to the rising pipe. A removable inspection cover is provided on the chamber outside to provide for a possibility to clean the press zone section. A second inspection cover is provided below, bolted to the rising pipe, to allow for control of the press zone.

Automatic press zone washing system:

Activation of the press zone washing systems effects cleansing of the press zone respectively press liquor collection chamber.

Screens with a 10¾ inch (273 mm) rising pipe diameter have a spray nozzle bar fitted to the bottom end plate. All other machine sizes have a ring-shaped spray nozzle bar at the upper end plate of the press liquor collection chamber.

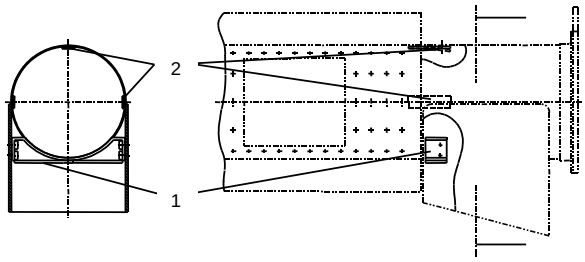
Automatic operation of press zone washing system: Water supply for press zone washing is automatically activated via a solenoid valve. The standard setting for the washing time is 30 s every 6 hours, but can be adjusted to suit specific operational conditions and ensure sufficient cleaning of the collection chamber. The washing time can be changed independent of the operational conditions to ensure a sufficient cleaning of the collection chamber.

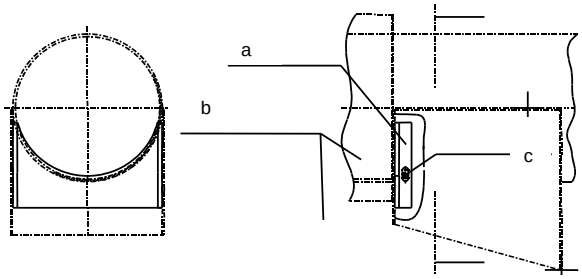
Manual/Hand operation of press zone washing system: Open water supply for approx. 30 s once or twice a week. The connection for water is a quick coupling on the press liquor collection chamber.

Water supply:	See chapter 5.1.2	
Operational water pressure:	min 70 psi (5 bar)	max 100 psi (7 bar)
Water quality:	min 200 micron screened or filtered water	

Regulation devices for increased/reduced compaction:

All rising pipes (with 10¾ inches/273mm and 20 inches/508 mm diameter) have a detachable extension piece (part 1, 2 inches/50 mm long) which lengthens the press zone at the upper end to increase compaction. This extension piece can be dismounted if the DS content of screenings is too high.
Size 2000 - 3000 screens, i.e. pipe diameter 20 inches/508 mm, have additionally three adjustable flat iron bars (part 2) which can be set inwards from the rising pipe wall towards the shaft to increase the compressive strength and thus the DS content.





The machine sizes 1400-1800 (14 inches/355 mm pipe diameter) have a displaceable plate (part a) installed in the discharge which can be displaced by means of fixing screws (part c). Displace the plate downwards if the DS content is too high and upwards if the DS content is too low. Standard setting: 1-7/12 inches (40 mm) from the lower discharge end, which reduces the cross section by 5/16 inch (8 mm) (see b).

⚠ WARNING

Switch off and padlock the mains isolator prior to starting to work on the press zone.

Attention: Never grip into the machine's discharge while the machine is running! DANGER!
- Be careful not to get caught!

1.5.3 Bagging unit (option)

The screenings are discharged into a plastic bag fixed at the discharge of the screen. The bagging unit reduces odor annoyance as would be caused by screenings lying in the skip or container.

Design of the bagging unit for endless bags:
The bagging unit consists of a transition piece to take up the folded 295 ft (90 m) long plastic bag. When you replace the skip, pull the bag (Longo-Pack bag, article no. 706880) approx. 1 ft

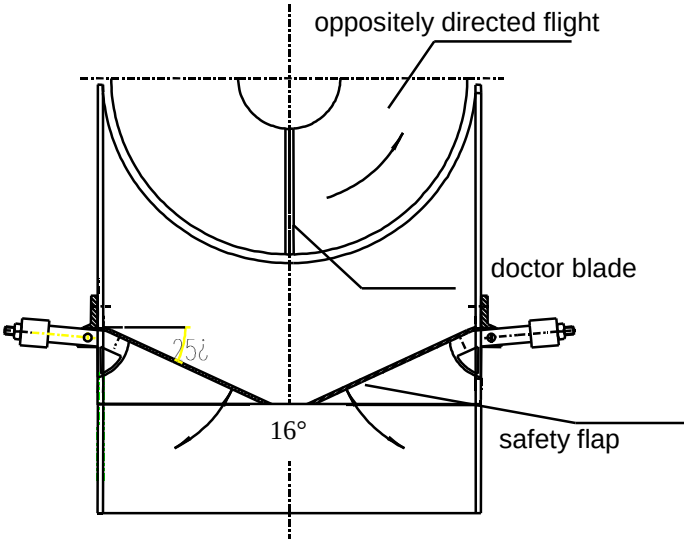
(30cm) downwards. Lace the bag and cut it through above the knot. Lace also the end that hangs down so that the hose can again be filled with screenings.

Switch off the machine prior to replacing the bags and wear gloves!

1.5.4 Safety flap

The safety flap inside the discharge is installed to prevent that someone grips unintentionally into the discharge. He may get caught between the discharge and the oppositely directed end flight with doctor blades mounted on the screw while the machine is running.

*The protecting flap is installed **only** on machines with a discharge height up to 8.2 ft (2.5 m) that do not have a closed chute with a minimum length of 31.5 inches (800 mm).*



1.5.5 Integrated screenings washing system IRGA

Intensive water jets break up the soluble matter contained in the screenings. The soluble matter is led to the biological treatment process together with the wash water. Clean screenings can be dewatered more effectively, their weight is reduced and their disposal less expensive.

IRGA system design:
The 3 washing systems are: preliminary washing, washing with pressure, fine washing

Preliminary washing:	Spray bar on the right trough edge. A plate covers the spray bar to prevent blinding with screenings. Water supply via solenoid valve 1.
Washing with pressure:	Spray bar on the base plate over the trough. Water supply via solenoid valve 1.
Fine washing:	3 nozzle units on the rising pipe connected with pressure hoses; the nozzles spray in an exactly defined angle onto the screenings while these are conveyed by the screw. Water supply via solenoid valve *1 (on machine size 1400 and bigger via a second solenoid valve which is separately controlled)*.

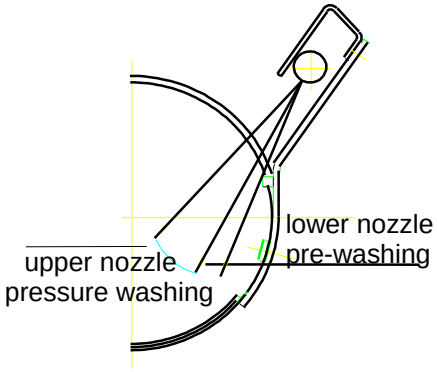
Working principle:

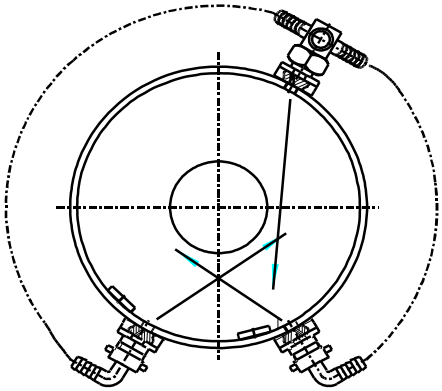
Preliminary washing: Most of the fecal matter is flushed down by a flat jet in the trough. The wash water runs off through the perforated trough into the channel.

Washing with pressure: Residual feces are broken up by means of a mist of water which the screenings are passed through.

Fine washing: Removes residual feces. Three jets spray onto the screenings from different angles creating a vortex. The wash water runs off through the gaps between the wall and screw into the trough and further on into the channel.

The IRGA system is activated simultaneously when the screen is switched on.





Preliminary washing and washing with pressure fine washing on rising pipe

Water supply: See chapter 5.1.2

Operating water pressure: min 70 psi (5 bar) max 100 psi (7 bar)

Water quality: min 200 micron screened or filtered water

Setting:
The functional process starts with the start of the screen. The impulse/pause times of the first solenoid valve are adjusted in the text display:

Impulse time: Basic setting: 4 s
Pause time: Basic setting: 2 s

Reduce the pause time to achieve intensified screenings washing, prolong the pause time to achieve a reduced screenings washing efficiency. Intensified washing requires an increased water demand.

On screen sizes 1400 - 3000 impulse/pause times have to be adjusted in the text display for the second solenoid valve (fine washing):

Impulse time: Basic setting: 2 s
Pause time: Basic setting: 3 s

It is generally recommended not to change the fine washing intervals. Too long washing intervals involve the danger that screenings are washed back into the rising pipe.

1.5.6 Trace heating (optional)

Trace heating with a heating tape and additional insulation with covering shells is effective down to -13°F (-25°C) and is suitable for classified areas.

A self-regulating heating tape is applied which is wrapped around the rising pipe (trace heating). The rising pipe is additionally covered with 2.36 inches (60 mm) insulation material and a stainless steel plate. Control of the heating is via a thermostat.

1.5.7 Level control system

Since the level control system is part of the electrical switchboard and control panel, it is only part of Huber supply if the machine is ordered complete with the electrical control panel. Further information regarding the level control system can be found in the control panel section of this manual.

Huber's standard level control system for channel installations is an ultrasonic level switch e.g. Siemens Pointek ULS 200. Huber's standard level control system for tank installations is a submersible hydrostatic level transducer e.g. Esterline KPSI Series 700. Please check the manufacturer's operating instructions for detailed information.

The starting impulse in automatic mode is caused by the level transducer, i.e. when the water in front of the screen reaches a certain level (variable), the screen starts. The start level has to be below the screen trough level to avoid flooding of the screen. Please refer to the installation drawing for the maximum water level in front of the screen.

By setting a certain run-on (off delay) time of the screen, the transport of screenings out of the screenings trough is ensured.

Dual point ultrasonic level controller (optional / recommended for larger screen sizes)
Differential level measurement can be used in particular for larger size screens. Huber's standard differential level control system is a dual point ultrasonic level controller e.g. Siemens HydroRanger 200.

If the start level is lower or the level difference is smaller the machine starts earlier and the running hours increase. For control of the running hours and setting of the level control system typical annual running hours have been determined which are specified below.

Size 600 - 1200:	approx. 1000 - 2000 h/year
Size 1400 -3000:	approx. 1500 - 3000 h/year (longer cycle duration)

The data specified above are only basic settings which need to be adjusted to the individual wastewater quality and operational requirements!

The operator is responsible to prevent metallic dry objects from falling onto the dry plant. In explosive areas plant control must be via level control to prevent dry running of the plant.

1.5.8 Soft starter

Soft start devices ensure a smooth start and slow-down of three-phase current motors as they reduce the terminal voltage of the motor. During starting the voltage is increased by time-control from an adjustable starting voltage up to the maximum voltage.

The screen drive motor must be controlled by means of a soft starter. For certain designs and drum sizes a frequency transformer must be used as soft starter. If a polyurethane sealing is used on the baffle plate, a frequency transformer is required as soft starter.

Huber uses a VFD as a standard for soft start operation of the screen. The VFD provides a current limiting ramp to start and stop the motor.

1.5.9 Tank cleaning nozzle (option)

This cleaning system is provided for washing / automatic cleaning of the inside tank walls. It is recommended to start the cleaning process at least once a day and always prior to any longer shutdown.

In HAND operation mode the respective solenoid valve opens when the position switch is set to HAND and gives way to the tank cleaning nozzle feed. In AUTO mode the solenoid is actuated automatically every 6 hours (standard setting). Based on the site conditions the cleaning interval can be increased or decreased. The valve opening time is 30 s. The time can be set on the operator interface.

2 Safety

2.1 General safety instructions

DANGER

„DANGER“ indicates a hazardous situation which, if not avoided, will result in death or serious injury.

WARNING

„WARNING“ indicates a hazardous situation which, if not avoided, could result in death or serious injury.

CAUTION

„CAUTION“ indicates a hazardous situation which, if not avoided, may result in minor or moderate injury.

NOTICE

„NOTICE“ indicates a property damage message. Follow notices to avoid material damage!

These operating instructions have to remain attached to the machine. It must be made sure that the operating instructions are ready to hand any time for any person that has to perform work on the machine. In addition to these operating instructions, instructions in the sense of the labor protection law and ordinance regulating the use of tools have to be available.
As these operating instructions contain fundamental instructions to be observed when installing, operating and servicing the machine, the responsible staff must read the instructions prior to machine installation and start-up. The operating instructions must at any time be available ready to hand at the installation place of the machine/plant. Not only the general safety instructions contained in this chapter have to be observed but also the special safety instructions added under the main items.

2.1.1 Operator's duty of care

The plant has been constructed and manufactured taking into consideration a risk analysis and after careful selection of the applicable harmonized standards and other technical specifications. The machine complies with the state-of-the-art technology and offers a maximum amount of safety.

To achieve such safety in practical operation, it is however necessary to take any measures required therefore. It is the operator's duty of care to plan these measures and control their implementation.

The operator must especially ensure that

- The machine is applied according to its intended use (see chapter *Product Specification*)
- The machine is operated only in a perfect ready-to-operate condition and especially the safety devices are regularly controlled.

- Protective gear for the operating, maintenance and repair personnel is available and used.
- These operating instructions are permanently available on site complete and in a legible condition.
- Only sufficiently qualified and authorized personnel are in charge of machine operation, maintenance and repair.
- Such personnel receive regular briefing concerning all questions of safety and environmental protection and know these operating instructions, especially the safety instructions contained.
- Any safety and warning symbols attached to the machine remain there in a legible condition.

2.1.2 Definition of safety symbols

⚠ WARNING

Occupational safety symbol
This symbol will accompany all safety instructions that are associated with risks to life and/or limb. Follow these instructions and proceed carefully! At the same time, follow all applicable laws, general safety and accident prevention regulations.

⚠ WARNING

Electric current warning
This symbol warns of electric current. Prior to performing any work, switch off mains isolator and make sure that the system is off-circuit.
At the same time, follow all applicable laws, general safety and accident prevention regulations.

⚠ WARNING

Be careful not to get caught when starting up, servicing or repairing the machine!

NOTICE

This symbol is found where special attention is required to ensure compliance with instructions concerning correct operating sequences to prevent damage to the machine or its function.

Instructions directly attached to the machine, e.g.

- Instructions and warning signs
- Labels for liquid connections
- Arrow showing the direction of rotation

must be strictly followed and kept in absolutely legible condition.
Signs or labels that have become illegible must be replaced immediately.

2.1.3 Qualification and training of personnel

Only well-trained and briefed persons who know these operating instructions and act according to these instructions are authorized to operate the machine. The individual areas of responsibility of operating staff must be defined clearly. The area of authority, responsibility and control of the personnel must be precisely regulated by the operator. The operator must further ensure that the personnel have fully understood these operating instructions.

Personnel being trained must in the beginning work under the supervision of an experienced person. The completed successful training and briefing must be confirmed in writing.

Any electrical control and safety devices must generally be operated by instructed and authorized persons only.

Any person performing work on the machine must read these operating instructions and confirm by signature that the operating instructions have been understood.

2.1.4 Safety instructions for maintenance, inspection, installation

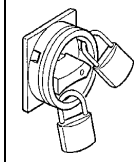
Any maintenance work must be carried out by qualified staff only.
Any inspection and installation work must be carried out by authorized and qualified staff only.

Work on the plant may only be carried out after the plant has been isolated.

Enclosed rooms of wastewater treatment plants that must be entered for service and maintenance have to be aerated in a way that prevents a dangerous explosive atmosphere, lack of oxygen and presence of harmful concentrations of gas or vapor.

⚠ WARNING

Secure the machine against unexpected start in case of open access to the screenings discharge resp. secure the access to this danger area before changing the screenings container or doing maintenance work or disassembling on a downstream machine.



⚠ WARNING

Shutdown procedure: Switch off mains isolator and lock it.
Each person who is commissioned to perform maintenance work on the machine must have his own padlock. Starting the machine is only possible when all padlocks on the mains isolator have been removed.

Do not immediately re-start the machine, if the reason why it has stopped is unclear. Somebody could have stopped the machine in order to make a manual adjustment and may have forgotten to secure it against starting. The unexpected start could result in serious injury of personnel.

It is in your own interest to clean the machine prior to working on it to prevent the danger of infections.

⚠ CAUTION

Always protect yourself by means of waterproof protective gear, boots, gloves, and, if possible, also by face protection during cleaning of the machine - especially if a high pressure cleaner is being used – to avoid being hit by waste water, organic material, etc.

Re-attach all safety equipment, covers, grates completely to their original place and assure that they are properly and completely reattached.

Use only tools and means that are expressly intended for such work.

Before starting the machine again, check the items mentioned in chapter *Start-up*.

2.1.5 Other dangers

Other dangers are potential, non-apparent dangers.

Despite all precautions taken, there are other dangers, such as:

- To be caught by unintentional movements of the machine
- To slip on wet or dirty ground
- Danger of falling in front of or onto the machine during maintenance work
- Malfunctioning control
- Allergies and irritations caused by contact with waste water or screenings
- Infections caused by bacteria or pollution
- Explosions or fire caused by gas or fumes
- Increased water passage after heavy rainfall for example

2.1.6 Unauthorized rebuilding and production of spare parts

Alterations or changes to the machine:

For safety reasons, it is not permitted to make unauthorized alterations or changes to the machine. This applies also to welding work on bearing components.

Any intended modifications, alterations or changes require the prior written consent of Huber Technology.

Use only original spare parts, original wearing parts and original accessories as these are especially designed for the machine. Components purchased from other sources give no guarantee that they have been designed and manufactured to suit the specific operating and safety requirements.
Components purchased from other sources give no guarantee that they have been designed and manufactured to suit the specific operating and safety requirements.

2.2 Machine identification

Any specifications made in these operating instructions apply to only the type of machine that is named on the title page.
The identification plate is attached to the screenings discharge and specifies the following:

- Name and address of supplier
- Serial name and type, optionally serial number
- Year of manufacture

Always forward the machine type, year of manufacture and order number when inquiring or ordering spare parts to ensure perfect and prompt processing or your queries and orders.

2.3 Incorporated safety systems

The incorporated safety systems are subject to regular checkups.

Mains isolator
The mains isolator is located on the control panel and disconnects/connects the machine from/with the mains supply.

Padlock the mains isolator after switch-off prior to performing service or repair work.

Emergency cutoff circuit
The machine is included in an emergency cutoff circuit.
The emergency cutoff switch is located on the control panel and/ or local control station.
Whenever the emergency cutoff switch is operated, the machine or complete plant including incorporated units will be set into a safe operating state.

Motor temperature control
The machine is equipped with a thermostat for motor temperature control with overload protection. The motor of the machine is switched off in the event of too much heat built-up. The overcurrent safety device using a thermal delay must be set to disrupt the drive motor from the power system within the delay $t_{E..}$

Plant control
Internal plant control includes a 4-conductor feed system, 3 phase, with separate earth line with GREEN line coating.
Additionally earth the machine casing for potential equalization

⚠ WARNING

Control panels can only be opened by an authorized person. Take care that doors of control panels are only opened by skilled staff for maintenance work and fault detection, otherwise the doors must stay locked.

NOTICE

These operating instructions are part of the machine and have to be available for the operating staff at any time.
The safety instructions contained must be observed.
It is strictly prohibited to override any safety instructions or change the mode of action of safety instructions.

2.4 Safety measures

It is the operator's responsibility to instruct his operating and servicing staff concerning:
- Protective devices on the machine,
- Control of observance of safety measures.

This copy of operating instructions have to be stored to be at hand when needed in the future. Observe the intervals for inspection and control measures! In these operating instructions, the work is described so that it can be understood by
- **an instructed person** (referring to chapter *Operation and operation modes*
- skilled staff (referring to chapters Transport, Installation, Maintenance, Trouble Shooting and Repair).

The chapters ***Transport, Installation, Maintenance, Trouble Shooting and Repair*** are intended **for skilled staff only**. Any work described under these chapters must be performed by skilled staff only.

Instructed person
An instructed person is a person that has been instructed by a skilled person, and trained if necessary, about the assigned jobs and possible risks arising from improper performance and informed about necessary protective devices and protective measures.

Skilled persons
Skilled persons are persons that are able to evaluate assigned jobs and recognize possible risks, due to their professional skills, expertise and experience and knowledge of corresponding standards.

2.5 Operator's duty of care

The operator has to obtain the local operating license and observe the respective requirements.

In addition, the operator has to observe the local laws concerning
- Safety of personnel (accident prevention regulations)
- Safety of work equipment (protective gear and maintenance)
- Product disposal (Waste Management Law)
- Material disposal (Waste Management Law)
- Material disposal (Waste Management Law)
- Cleaning (cleaning agent and disposal)
- Environmental compliance

Connections:
The operator has to ensure before start-up of the machine, if installation and start-up are performed by the operator himself, to comply with local standards (such as for electrical connection for instance).

NOTICE

Lighting
The operator has to provide sufficient and equal lighting in all areas of the plant. The recommended illumination level is 300 lux.

3 Handling and Transporting

Observe the following points to avoid damage to the machine or persons when handling the equipment:

- Only qualified persons are permitted to perform transport work, observing the safety instructions.
- Lifting and righting of the equipment must be done only by the lifting eyes provided.
- Use only the lifting devices specified hereunder to transport the machine.
- Read also the chapter General Safety Instructions.

3.1 Dimensions and weight

The machine length and arrangement are adjusted to suit specific site requirements (available space, channel depth, discharge height).

The dimensions are specified in the project-specific installation drawing attached to these installation instructions.

The weight of the screen depends on the machine size and length. The weights are specified in the installation drawing.

The machines are packed on palettes for trucking, and in sea-water-proof boxes for sea transport.

3.2 Permitted transport devices and auxiliaries

⚠ CAUTION

Have transport and unloading done by experienced experts only.

Fork lift or building machine of sufficient lifting capacity to handle the weight and size of the equipment, to be operated by qualified personnel only. Rope slings or straps of required load bearing capacity. Prior to unloading, remove the small parts supplied with the machine, such as supports, from the transport rack.

⚠ WARNING

Attachment: Hook shackle, load hook etc. into the lifting eyes on the upper side of the rising pipe. Fixing points are marked with the symbol LIFT HERE (as shown here on the right). The ropes of the lifting device must hang freely and must not be attached more than 60° from the vertical. The machine must hang horizontally during unloading.

Never lift at the thicker part of the rising pipe prior to the screenings discharge. This is the press liquor collection chamber which is made of thinner plate or plastic and is unable to bear the machine weight.
Never wrap a chain around the machine as this may slip and cause the machine to tilt over. In addition, the machine will rust on those points where it gets into touch with black steel if it is not re-pickled.

Inspect all materials for damage before and during unloading. Any transport damage found should be noted on the bill of lading and the forwarder and manufacturer/supplier notified immediately.

NOTICE

Make sure the delivery is complete by carefully checking all received materials against the bill of delivery.

3.3 Storage

When selecting the storage place take care that the components cannot be damaged by vehicles or careless working. Make sure the components cannot get dirty due to splashes of concrete or mortar and protect the machine against spark fountains from angle grinders etc.
Cover the motor (in order to avoid ingress of water) on machines stored outdoors, but do not wrap it. Never expose the control panel to rain (temperature down to -40°F (- 40°C) is permissible).

NOTICE

Do not lay the machine on its thicker part prior to the screenings discharge (press liquor collection chamber) since this will damage the press liquor collection chamber.

3.4 Transport to the installation place

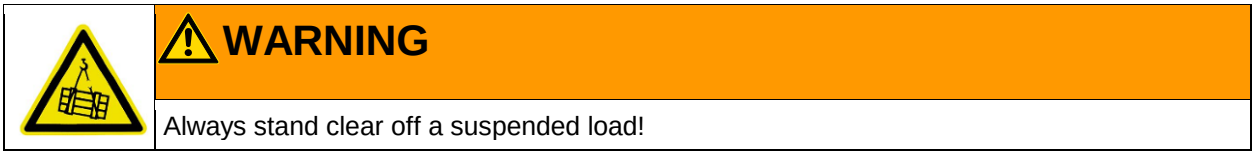
As there are different situations and possibilities at the individual sites, we cannot give exact installation instructions. This work must be carried out by qualified fitters.

You always need lifting equipment for transporting the machine from the intermediate storage place to the installation place because of the machine weight.

As lifting equipment up to the building are used: caterpillars, power shovel, cranes etc. dependent on the access ways. Lifting equipment mostly used in a building is: Polyester slings, tripods, chain tackle block, fork lift, transport rollers, tackles.

⚠ CAUTION

Wear safety shoes with steel caps to prevent injuries.



⚠ WARNING

Always stand clear off a suspended load!

Unpacking:
Do not loosen the clamping bands or steel ropes before the machine is right in its installation place.

4 Installation

Observe the following safety instructions when installing the machine to avoid critical injuries, damage to the machine and other damage.

- Only qualified persons are permitted to perform installation work, observing the safety instructions.
- Check the machine for transport damage prior to starting with any installation work.
- Make sure that only authorized persons have access to the working area and that installation work does not endanger any other persons.
- When laying machine connections, make sure that no one can trip over laid cables, hoses, pipelines, etc.
- Observe the prescribed bending radii when laying cables/hoses/pipelines.
- Observe the instructions for operating media, lubricants, auxiliary material used.
- Read also the chapter General Safety Instructions.

4.1 Acceptable environmental conditions

The machine is manufactured for installation in a building or for outdoor installation as specified by the customer.

⚠ CAUTION

Stainless steel parts can get very hot in case of heavy solar radiation, danger of burning.

Frost protection:
Machines without trace heating and insulation and/or casing must not be operated in winter due to the danger of freezing. Appropriate measures must be taken (e.g. complete emptying) to ensure that the machine cannot freeze.

Protection against dust and water:
As the atmosphere in the buildings is permanently humid, the equipment is designed to resist these conditions.

All components in contact with water and solids are made of stainless steel which is insusceptible to moisture and wetness.
The gear motors are made for IP 65 and are therefore protected against permeation of dust and spray water from any direction.
The solenoid coils, if fitted to the machine, also provide IP 65 protection.

Protection against explosion (optional):

Gear motor:	Class 1 Division 2
Solenoid valves:	Class 1 Division 2

Lighting
The lighting must make safe working on each part of the plant possible without any risk.

NOTICE

Lighting
The operator has to provide sufficient and equal lighting in all areas of the plant. The recommended illumination level is 300 lux.

4.2 Site requirements

Cover all channel sections which do not need to be accessible for machine installation. Fix a railing along open channel sections. There must be enough space available around the machine for repair and maintenance work.

Required minimum **distance** to the machine (or railing):

- 3.3 ft (1 m) at the side
- 5 ft (1.5 m) in front of (e.g. to pivot the machine out of the channel)
- 8.2 ft (2.5 m) behind the machine (e.g. to dismount the motor)

Trapezoidal channel shape
To avoid grit sedimentation we recommend to have trapezoidal channels to maintain an as high as possible flow velocity even in the event of dry weather flow. The channel in the screen basket area, however, must not be trapezoidal.
A bottom step is recommended to ensure the minimum depth of immersion of the screen surface and to keep the switch-on frequency as low as possible.

Emergency bypass
An emergency bypass is absolutely necessary for one-line plants, such as for the event of a power failure or fault.
The complete hydraulic conditions of the sewage treatment works must be taken into account for dimensioning of the emergency bypass. It is important that the emergency bypass overflow weir lies approx. 2 inches (50 mm) below max. water level (see installation drawing) to protect the screen.

Stop logs or penstocks must be positioned in front of and behind the machine to enable shut-off of the machine for repair. No cross section or penstock must however be positioned in the installation area of the machine.

Make sure the door/gate in the building offers sufficient space to pass the machine. It is recommended to attach a suitable mounting support to the ceiling, in the direction of the machine's axis.

Static dimensioning of the points where the machine is supported by legs on the channel bottom and under the rising pipe on the building bottom or top of the channel must be carried out according to the weights specified in the manufacturer's data sheet.

4.3 General instructions for installation

Installation must be carried out in accordance with these instructions if installation is not part of the supply contract with Huber Technology. If installation is not performed by Huber Technology, Huber Technology cannot accept responsibility for incorrect offloading or installation.
Installation must be performed by qualified and experienced personnel.

Prior to installation:

- Completely read these instructions. They contain important information how to prevent damage caused by lack of knowledge.
- Approach roads must be provided so that the machine can be installed either by means of a crane in case of outdoor installation or by a lifting truck and rollers as well as by lifting chain block or hoist in case of installation in a building.
- Electrical power must be provided to be available on site at the installation date.

Preliminary work:

- If a channel cover is to be installed, mount the frame and exactly measure the cover dimensions (see installation drawing).
- If it is an installation in a building, make sure a mounting support is fitted centrally above the machine.
- Prepare a closable water supply line exiting from the bottom (see installation drawing).
- Prepare sufficiently sized conduits for electrical installation from the control panel to the machine and channel for level control (for details see installation drawing).
- In the installation area of the Rotamat machine, cross girders, penstocks or other are not allowed.
- There has to be an emergency by-pass in front of the machine. Take the overflow weir height from the installation drawing.

Preparatory work:

- Check all assembly and fixing material making sure it is complete.
- Prepare all material necessary for water connection.
- Prepare all cables according to the cable list (see wiring diagram) and all necessary small components (e.g. level transducers).
- Prepare lifting device that is able to lift the load during installation.
- Clean the channel / installation place with a broom before installation in order to prevent injuries caused by slipping.

4.4 Assembly and installation

4.4.1 Mechanical installation

General instructions:

- Fix lifting devices (2 chain hoists or similar) to the prepared installation supports over the channel. If necessary, prepare points of suspension with required load bearing capacity and arrange in such a way that the plant can hang above the installation area without manual moving.
- Secure safety load hooks on transport eyes or rope straps to the machine and the lifting device.

NOTICE

Blow the holes for the stainless steel plugs under pressure after drilling (using bellows, air pump, etc.) to ensure a professional durable adhesive joint.

Use grease for all unlockable screws, thus providing a durable mobility of thread.

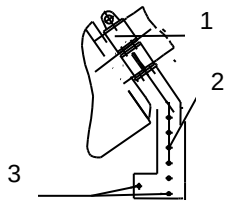
How to proceed:

- Lift the machine on the lifting eyes and lower it slowly from its horizontal position into installation position (30° or 35° angle). See installation drawing.
- Place the machine down into the channel (or tank). The correct lower landing point can be taken from the installation drawing. Standard is 4.9 inches (125 mm) distance behind the bottom step.
- Fix the support provisionally. On machines with insulated rising pipe the pipe clamp may be displaced by +/-4 inches (+/-100 mm) according to the installation drawing.
- Make sure there is no weight acting on the baffle plate from below. (If necessary, lift the screen basket until the baffle plate rests no longer on the channel floor.)

Please note that the following steps depend on the size of machine!

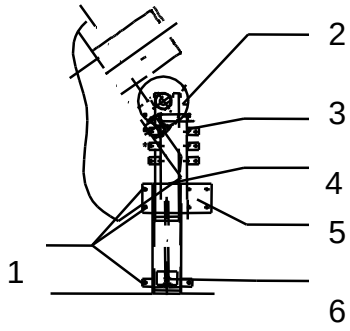
Size 600-1200:

- Attach pipe clamp to the rising pipe and fix machine supports to the clamp. (See 1 in the drawing below.).
- Attach fixing angles to channel wall and tighten screws of cross bar.
- Use the three lowest boreholes and the upmost borehole in the angle for dowelling. (See 2 and 3 in the drawing below.)



Size 1400 and bigger:

- Position the basket relieving support vertical to the stub shaft of the traverse support.
- Fix the lower part of the relieving support with dowels (see 1, 5 and 6).



- Slip the upper part of the basket relieving support up to the stop position of the stub shaft, or wind it up with the spindle if the machine size is 2000 or bigger, until the relieving support takes over the total load.
- Secure the upper and lower part of the basket relieving support with a welding seam (item 4) and fix then also the upper basket relieving support with dowels (item 2 and 3).
- Screw the set screws on the stub shaft of the traverse support evenly towards the channel wall and secure with a lock nut.
- Final fixing of the support: Bore holes in the C-section and screw with the foot.

Bottom support of drum (larger drum sizes only)

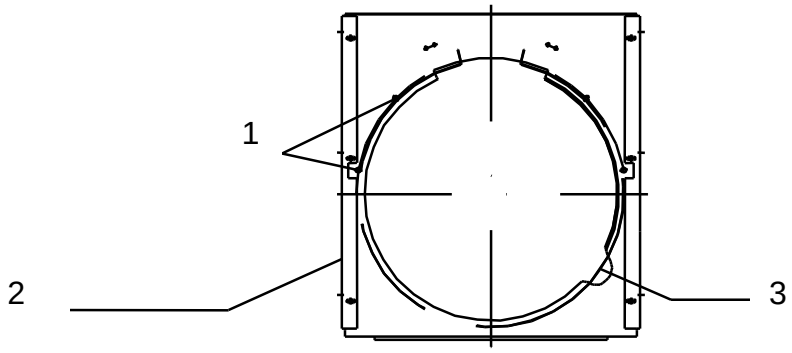
A bottom support of the drum may be required for certain designs and drum sizes.

- Fix the bottom support to the channel bottom.
- Fix the bottom support to the stud of the drum and to the channel bottom, as shown above.

The further instructions are valid for all machine sizes:

- Fix the baffle plate with dowels to the channel side (see 2) and adjust the angle towards the channel.
- Seal the baffle plate towards the channel walls and bottom with sealing tape (foam material which will swell when in contact with water) ***(sealing only require for RPPS with PU seal)***

Sealing tape for baffle plate (green backing)



- Remove 4 fixing screws of the shipping braces (see 1) which hold the distance ring on the baffle plate and remove the distance ring (part 3).
- Insert the supplied blanking plugs into the holes.
- Remove the lifting device.

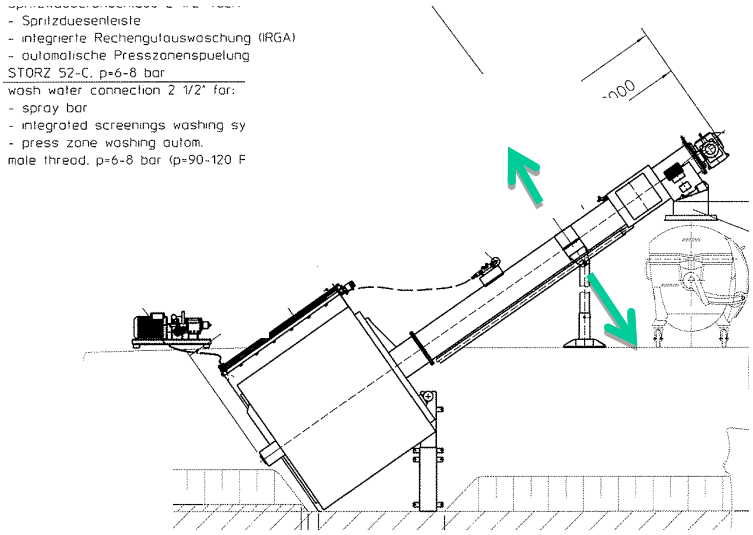
- **BRUSH SEAL:** Check if the cleaning brush is perfectly fixed. The brushes should extend regularly over the whole screen basket.
- Adjust the brushes by means of the adjusting screws or slotted holes.

- **PU SEAL:** Check that the basket sealing is exactly adjusted. Make sure the distance of the polyurethane sealing is the same along the entire circumference (X) of the baffle plate. Exactly correct the distance at the support by lifting or lowering the support a little. Take a control measure (e. g. upper edge of sealing support to upper edge of baffle plate). Note down the measurement reading.
- Prior to the initial test run, apply silicone spray onto the PU sealing. As an alternative, grease may be applied. Use a brush to apply the silicone spray or grease. Never remove the support ring, otherwise the sealing can no longer be installed in the required bended shape.

- Read also the detailed description provided under *Product Specification*.
- Screw the chute and/or bagging unit (if any) to the screenings discharge.
- Connect water supply.
- Position the cover plate for the spray bar so that misting of spray water is prevented.

- **After successful completion of the test run, carefully introduce wastewater into the screen basket. Check the control measure. If necessary, make corrections by again lifting or lowering the support a little. Also check the machine for true running, both visually and by measuring the current consumption of the drive motor. If you notice untrue running or increased current consumption, optimize the screen basket position by lowering or lifting the basket by means of the support.**

In case of untrue running or excessive current consumption, optimize the screen basket position (by lowering it e. g. with straps or lifting it by means of the support).



- When all measures have been checked and found OK, fix the support to the rising pipe by drilling and screwing the C-profile to the foot part.

- **For safety:** Mount a cover over the screen basket or provide for a railing along open channel sections or for a channel cover.

4.4.2 Electrical installation

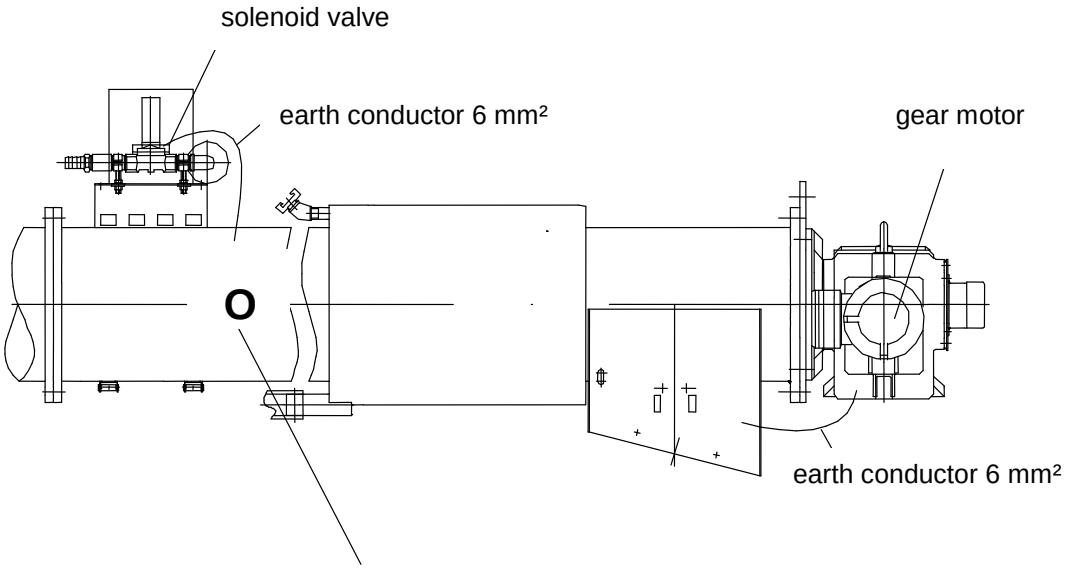
Electrical installation to be carried out by qualified electricians only.

General:
The following instructions are offered for guidance if installation is not included in the supply contract.
If installation is not included in the supply contract, HUBER Technology cannot accept responsibility for incorrect installation.

Wiring:

	**⚠ WARNING**
	Make sure that power supply is disconnected! **Secure this condition by appropriate measures!**

- Prepare earth connection to the plant prior to beginning any other work, and earth the gear motor and solenoid valves (optional). The protection system of the terminal sockets must correspond to the protection system in which the plant has been installed.



earth conductor point 10 mm²
The earth point has to be connected with the main voltage equaliser.
Observe local protective measures as per local standards

- Fix the control panel with bolts in the intended position.
- Fix the adjacent control box with dowels next to / onto the machine.
- Prepare all cables between the machine, control panel and adjacent control box and connect the plant to the power supply according to the specifications in the wiring diagram. The wiring diagram and cable list are attached in the appendix, if the electrical switchboard and control panel is part of the Huber supply contract.

Install the ultrasonic level sensor(s) in the section up to 3.3 ft (1 m) in front of respectively behind the screen basket, if possible in a turbulence-free zone.

Note:
The correct rotation direction of the drive, viewed in flow direction, is anti-clockwise!

Prior to first start and. prior to any recommissioning (e.g. after changing the power supply) check the rotation direction of the motors!

5 Start-up

Observe the following safety instructions for machine start-up to avoid damage to the machine or injuries.

- Only qualified persons are permitted to perform start-up work, observing the safety instructions.
- Check before the first start-up that all tools and foreign objects have been removed.
- Activate all safety devices and emergency cutoff switches before start-up.
- Check that the motor running direction is correct. Screen drum rotation direction: anti-clockwise when viewed in flow direction
- Prior to initial start-up close the water supply hose and flush the pipe network. This will prevent that pollution particles can impair the function of or damage solenoid valves.

Read also the chapter *General Safety Instructions*.

5.1 Customer-supplied connections

All customer-supplied connections must be installed on the marked positions, or at least as close as possible, according to the manufacturer's instructions respectively installation drawing.

5.1.1 Electrical connection

The electrical connections must be laid to the installation place of the control panel;

Please refer to wiring diagram in control section for further information.

5.1.2 Connection for wash water

Required operational water pressure: min. 70 psi (5 bar) max. 100 psi (7 bar)

Water quality:
Use screened or filtered service or used water, with no particles bigger than 200 micron grain size. The water should have an as low as possible chloride and ferric oxide content and preferably a pH > 6.5.

If this is disregarded, the servo bores of the solenoid valves will clog and jet intensity reduced respectively the valves not perfectly close any longer.

Water supply line:
Which water supply line is required depends on the individual screen version. It is shown on the installation drawing.

- Dimension the supply line one size bigger if the line is longer than 100 m (shock pressure, line loss).
- The connection in the support leg area should emerge from an adjacent wall or the floor and should be lockable.
- The connection for press zone washing is located either laterally on the stainless steel press liquor collection chamber or in 12-o'clock position on the plastic chamber.
- The machine can have additional connections for the integrated screenings washing system IRGA and/or spray nozzle bar, this depends on the order and supply volume.
- A water connection (not below ¾") for cleaning work, maintenance etc. is required. For very greasy wastewater a warm water connection or steam jet should be available.
- The connection must be made of high-quality rubber fabric hose or a pipe connection.
- If fresh water is used it is necessary to provide a return flow inhibitor to prevent return flow of wastewater into the potable water network.
- If solenoid valves are used, a rubber hose is preferably recommended because its elasticity reduces shock pressures when the valve closes.

5.2 Checks prior to initial start-up

Prior to start-up:

Make yourself familiar with the

- operation and control elements of the machine
- machine equipment
- operation principle of the machine
- immediate environment of the machine
- safety devices of the machine
- measures to be taken in case of emergency

Perform the following work prior to any start-up:

- Check and make sure that all safety device are attached and in a ready-to-operate condition.
- Make sure the shipping brace of the drum was removed, compare with chapter 4.4.1, mechanical installation.
- Check the machine for visible damage and eliminate any damage found immediately or report them to the supervisory staff, as machine operation is only permitted if the machine is in a perfect condition.
- Check and make sure that authorized persons only have access to the operation area of the machine and no other persons are endangered by starting the machine.
- Remove any objects or other material from the operation area of the machine, which is not needed for machine operation.

Check that the screw-type cable fitting fits tight and re-tighten the screw, if necessary, to prevent ingress of water into the motor. (See below picture of the screw-type cable fitting.)

6 Operation

Observe the following instructions when operating the machine to avoid damage to the machine or injuries.

- Never use the machine for any other purpose than the intended use!
- Inform yourself about the correct behavior in case of a fault prior to switching the machine on.
- Check prior to switching the machine on that the following units are in a ready-to-operate condition:
- Protective devices
- Emergency cutoff switch

Read also the chapter *General Safety Instructions*.

6.1 Control philosophy

The electrical control regulates all automated functions of the machine both in automatic and hand mode. After switching the mains isolator on, the plant works in automatic mode. The control panel must be installed outside the screening room in a non-hazardous environment.

Read this chapter carefully if you have the electrical control panel supplied by a third company. The panel must be completely wired in order to connect the machine. The wiring diagram should lie inside the panel.

6.1.1 Control panel design and equipment

The equipment in detail is specified in the material list of the attached wiring diagram.

6.1.2 Standard design

The standard control panel comprises a stainless steel NEMA 4X enclosure housing mains, fuses, switches, controls and indicators. The control panel incorporates an Allen Bradley MicroLogix PLC for sequence control. A Panel View operator interface is used to display system status and to facilitate changing operating parameters.

Switch possibilities on control display
Operation and fault signals are indicated on the text display. After the plant has been switched on it is in AUTO mode. The operating keys of the text display, or local control station, allow different manual operation modes. For further details, see control panel section of the manual.

6.1.3 Current monitor

In the event of a motor overload the power supply stops much faster than the thermal motor protection switch and can therefore prevent any mechanical consequential damage.
A **current monitor** (or e.g. a true power monitor) is **imperative,** otherwise Huber Technology will not accept any liability for compensation of mechanical damage.

Settings:
The standard factory setting is carried out according to the enclosed motor data sheet or wiring diagram attached in the appendix.

Reset: Self-reset after re-start

⚠ CAUTION

Do not re-start the machine after the current relay has tripped before the cause for tripping has been found and eliminated. See also indications in text display!

6.1.4 Trace heating temperature switch (optional)

A thermostat with an external sensor controls ON and OFF of the power supply to the heating cable. The thermostat is either installed inside the control panel or directly field mounted to the screen.
Sensor position: laterally in the machine's discharge area or inside the stainless steel cover of the insulation.

Please refer to the control section for further information on the selected temperature switch and controls.

6.2 Operation possibilities

6.2.1 Switch possibilities on control display

Operation and fault signals are indicated on the text display, also the individual drives are controlled via the text display. After the plant has been switched on it is in AUTO mode.

The operating keys of the text display, or adjacent control box, allow different manual operation modes.

6.2.2 Operation by means of adjacent control switch

The control units are displaced from the main control panel into an adjacent control box (local control station) if the main control panel is not positioned within close distance to the machine. The machine can for example be installed in a classified area and operated via a NEMA 7 local control station while the main control panel is installed in a room without classification.

Equipment:
- Emergency stop pushbutton
- Selector switch (HOA) for screen, spray bar, press zone, screenings wash, *tank wash*
- Rotation selector switch (FOR) for screen

Arrangement:
Directly adjacent to the machine, installation options:
- On standard upright dowelled to the floor
- Clamp-mounted on the rising pipe

Rotation direction selector switch (FOR) positions on adjacent control box for manual operation:

Position	Action	Condition
HAND	Machine runs forwards	As long as the position switch remains in this position
Reverse*	Machine reverses	As long as the positions switch is in HAND position

Note:
Never reverse the screen by more than 90° to prevent damage of the lower screw section!

Selector switch (HOA) position:

Position	Action	Condition
AUTO	Machine runs in cycles	When level control or timer actuate
HAND	Machine runs forwards	As long as the rotation selector switch remains in this position

6.2.3 Time-dependent automatic start control

If the inflow rate is low, screenings may accumulate in front of the screen if the screen is not activated by level control. To prevent accumulation of screenings, the screen is programmed to start automatically after a selectable standstill time. The screen will run for a selectable run-on time.

The off time and run-on time (OFF delay) can be adjusted on the text display of the control panel. The screen should be active for the set run-on time (see also 6.2.4) of 30, 45 or 60 minutes. Standard setting: plant start after a 60 minute off time

6.2.4 Run-on time (OFF delay)

After activation via level control or automatic start control the screen runs until the set run-on time (OFF delay) expires. The run-on time (OFF delay) depends on the screen basket diameter (screen size).
The run-on time (OFF delay) of the screen needs to be adjusted on site during start-up!

Adjusting the time:
The run-on time (OFF delay) is adjusted by means of the control units. The standard settings are specified in the following table for all machine sizes. The cycle duration is specified in seconds.

Size	Run-on time Standard setting
600	10 sec
780 (L < 6550)	10 sec
780 (L > 6550)	16 sec
1000	16 sec
1200	16 sec
1400	25 sec
1600	25 sec
1800	25 sec
2000	35 sec
2200	35 sec
2400	35 sec
2600	35 sec
3000	46 sec

6.2.5 Limitation of reverse run

The standard setting of the maximum reverse run time allows reversing of 90°. Reversing in HAND mode is only possible when the switch is physically held in the HAND position (spring return switch).

DO NOT REVERSE THE SCREEN FOR A LONGER PERIOD IN HAND!

Screen Size	Reverse run time Standard setting
600	3 sec
780 (L < 6550)	3 sec
780 (L > 6550)	4 sec
1000	4 sec
1200	4 sec
1400	7 sec
1600	7 sec
1800	7 sec
2000	9 sec
2200	9 sec
2400	9 sec
2600	9 sec
3000	10 sec

7 Troubleshooting and Repair

Symptom	Possible cause	Repair
Screen does not run although the tripped lamp is off.	Mains isolator is in OFF position.	Switch mains isolator ON.
	Selector switch is in "0" or REVERSE position.	Turn selector switch to HAND or AUTO
	Control fuse has melted.	Replace fuse.
	PLC-CPU is set to STOP.	Switch to RUN.
	No signal from ultrasonic level transducer.	Check transducer.
Fault lamp is on or the fault is indicated in the text display	Motor overload has tripped.	a) Switch off mains isolator b) Check if something is jammed in the trough area (like a stone or piece of wood) or material is entangled in the discharge. c) Switch on motor protection switch and operate reset key. d) Switch on mains isolator.
	Current relay has tripped.	a) , b) , d) Ditto
	Phase breakdown	Check fuses and preceding fuses in control panel.
	The screenings DS content is too high.	Dismount the discharge opening reducing plate or displace the discharge dia. reducing plate downwards.
Continuous operation in AUTO mode AUTO	Level control is permanently activating because: Level transducer is blocked.	Check for obstructions in transducer acoustic beam.
Time-dependent control does not work.	Time has not been set in text display or on timer.	Set the time.
Solenoid valve does not close.	Servo boring is dirty inside.	Disassemble and clean the valve. Check dirt trap and insert a filter if required.

8 Maintenance and Repair

⚠ CAUTION

Enclosed rooms of wastewater treatment plants that must be entered for service and maintenance have to be aerated in a way that prevents a dangerous explosive atmosphere, lack of oxygen and presence of harmful concentrations of gas or vapor.

⚠ CAUTION

The chapter maintenance and repair is intended for skilled staff only.
Any maintenance or repair work must be performed by skilled staff only.
Skilled staff has to be equipped with personal protective gear (such as gloves, etc.).

Skilled persons
Skilled persons are persons that are able to evaluate assigned jobs and recognize possible risks, due to their professional skills, expertise and experience and knowledge of corresponding standards.

Regular cleaning and plant maintenance is required to ensure trouble-free plant operation.

⚠ CAUTION

Always wear protective glasses and rubber gloves if harmful materials have been processed by the machine.

The machine is subject to vibrations during operation, which may cause screw and clamp connections to get loose. To prevent damage, regularly check the machine.

⚠ CAUTION

It is essential to proceed as described under 2.1.4 when shutting down the machine prior to performing maintenance, repair or cleaning work. Use only tools and means that are expressly intended for such work.

Observe the following instructions when performing maintenance or repair work on the machine to avoid damage to the machine or injuries.

- Prior to performing any repair work, shut off a wide area around the machine.
- Switch off all voltage sources and secure the voltage sources to prevent they are unintentionally switched on again. If the machine is installed in a tank, switch off the mains switch before opening the tank.

- Never use any other than the specified operating media.
- Never use any other than the spare parts specified in our spare parts lists.
- Read also the chapter General Safety Instructions.

8.1 Cleaning and inspection schedule

NOTICE

Check the potential equalization regularly, as described in chapter 2.3, Incorporated safety systems!

Daily:

- Check screenings container and replace or empty it if necessary to avoid back-up of screenings into the discharge unit.

Weekly:

- Clean and inspect level sensor.
- Open the wash water valve for press zone washing and wash until clear water runs off through the transparent hose into the channel. This flushing may be required several times per week (only if press zone washing is manual and not included in automatic controls)
- Hose down possible deposits or stringy material on the screen basket. This cleaning may be required several times per week.
- Check the screenings discharge for ropes wrapping around the auger, remove screenings wraps.
- Check the bolted bottom screw flight for stringy material. To avoid stringy material buildup, run the machine in reverse until stringy material is broken up. **Observe the limitation of reverse run, chapter 6.2.5.**
- Grease the bottom bearing (size 2000 and bigger) after 20 hours of operation time of the plant with 5 strokes of the grease gun during the machine is turning. (only if greasing is manual and no grease pump is included)

Monthly:

- Clean the water strainer, if any, in front of the solenoid valve. Repeated cleaning may be necessary if the water is very dirty.
- Hose down the complete machine including the inside of the screen basket cover and tank (if any), with a high pressure cleaning device if possible. This prevents sedimentation and chloride accumulation that may lead to corrosion issues.
- Refill the tank of the lubrication pump (on size 2000 and bigger units), if required (see 8.2.2).
- Check the operation condition of the basket roller bearings and check bearing play.

⚠ CAUTION

Never use a high pressure unit to clean electrical plant equipment!

8.2 Inspection and preventive maintenance

8.2.1 Press zone inspection

The press zone, which is the zone prior to the discharge unit, consists either in a removable plastic shell or a welded stainless steel casing, depending on the machine size. A plug of screenings is produced inside the press zone. The press liquor drains off through perforated holes in the inner pipe into the outer chamber and from there back into the inlet. Regular washing of the press zone prevents sedimentation which would clog the perforations or press liquid hose.
In case screenings dewatering results becomes insufficient, it is necessary to inspect the press zone. Wet screenings are indicative for clogging of perforated holes.

⚠ WARNING

Switch off and lock the mains isolator prior to removing the inspection cover!

There is a dangerous zone between the rotating screw and inspection opening where you can get caught!

On machines with a plastic shell, the two half shells can completely be detached after removal of the clamping bands for easier dewatering of the perforated holes from outside. On machines with a stainless steel casing, remove the outer inspection cover and wash the perforated holes by means of a water hose or high-pressure unit.

If required, remove the inner inspection cover on the rising pipe and remove for example textiles or material wrapped around the screw shaft that are inaccessible by way through the screenings discharge unit.

When reattaching the inspection cover, make sure the fixing screws and straps fit tight since the pressure produced in the press zone is high. When reattaching the plastic chamber, make sure the rising pipe surface is clean and lubricate the sealing points on the end sides.

Read also the chapter *Product Specification*. This chapter contains details about the press zone.

8.2.2 Operating media and lubricant replacement

Gear motor:
The screen is equipped with a gear motor, the technical data and required lubricant amounts of which can be taken from the attached motor data sheet. The required lubricant amount is additionally specified on the identification plate. If two amounts are specified, the first refers to the main gearing while the second refers to the intermediate gearing.

Separate operating instructions for the gear motor are attached in the appendix. They include a list of permissible types of lubricant.

One recommended lubricant is Kluberoil G-4-220-US (Huber technology article # SP-KLG4220).

Under normal operational conditions it is recommended to replace the lubricant after approx. 15,000 operation hours. Independent of the operation time, lubricant replacement is recommended after 2-3 years at the latest.

Lubrication of lower bearing on machine size 2000 and bigger:
Machines ≥ 2000 mm (6.5 ft) drum diameter have a lubrication system for the lower bearing. This system consists of a lubrication line with a grease nipple on top. As an option we offer an automatic lubrication system. The standard setting of the pump is 35 sec running time after one operation hour, controlled in parallel to the drive motor. Details of the grease pump can be found in a separate section.

The standard lubricant is STABYL EOS E2 by Fuchs Lubritech, which is biologically degradable (Huber Technology article # SP-V0919-001 for a 400 g cartridge).

NOTICE

The grease pump has a bursting limit disc integrated, i.e. grease will escape if the lubricant line is damaged or clogged. Eliminate clogging immediately to prevent damage of the bearing.

8.3 Repair

8.3.1 Pivoting / Lifting of the machine

Machine sizes 600-1200 can be pivoted around the pivot between pipe clamp and machine support to facilitate maintenance and repair.

⚠ WARNING

Use suitable lifting devices!
Always stand clear of a suspended load!

- Switch off mains isolator and lock it.
- If required, remove electrical lines and hose connections.
- Loosen the screws of the pivot below the pipe clamp.
- Remove the baffle plate in the channel be removing the fixing screws on the channel wall.
- Fix a traction rope in the lower lifting eye just behind the screen basket.
- Pivot the machine with baffle plate out of the channel, placing as little load as possible onto the machine support in longitudinal direction, i.e. the traction rope must draw vertically upwards. Too much axial load will bend and break the support.
- When performing maintenance work, secure the machine with cross beams against pivoting downwards.
- After performed maintenance, install the machine proceeding in reverse order.

Bigger machine sizes (size 1400 - 3000) must be lifted out completely.
The manufacturer does not accept any liability if faulty pivoting leads to damage to the machine support.

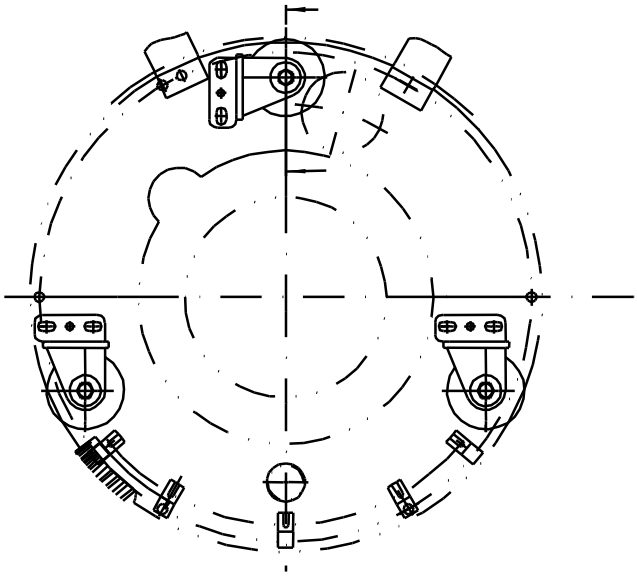
⚠ WARNING

Prevent canting over of the machine when removing the screen basket, which shifts the machine's centre of gravity.

8.3.2 Roller replacement

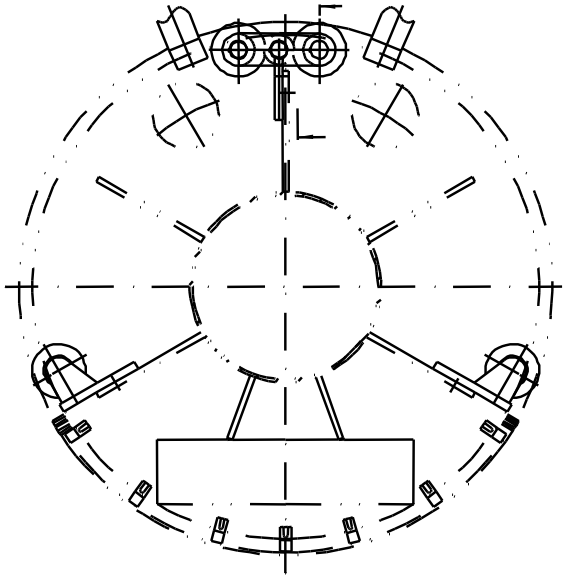
The screen basket is on its upper end supported by rollers. Dependent on the machine size there is one single roller or a pair of rollers. Lateral fixing is by means of two single rollers.

Machine size 600 – 1200 (screen drum diameter)



- Remove the screws of the lateral roller holding assembly and turn the roller systems inwards.
- Slightly lift the screen basket to remove the load from the bearing roller.
- Remove the roller holding assembly including the edged adjusting pin.
- Replace the roller and re-attach the holding assembly with screws and edged adjusting pin.
- Lower the drum carefully.
- Fit the lateral roller systems to the screen basket (without applying any pressure!) and fix them.
- Carry out a test run.

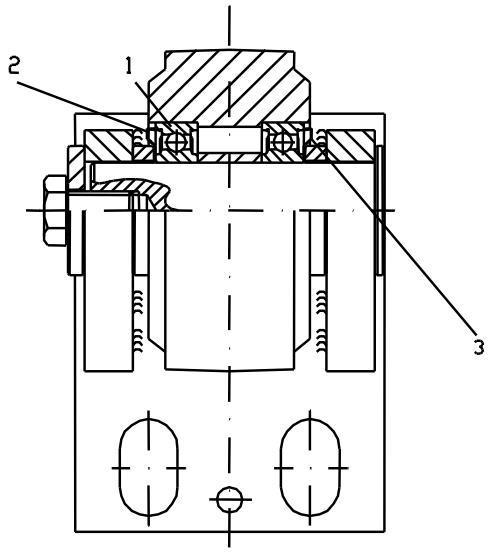
Size 1400 and bigger (screen drum diameter):



- Loosen the screws of the lateral roller holding assembly and push the holding assembly inwards.
- Slightly lift the screen basket to remove the load from the bearing rollers.

- Drive out the edged adjusting pin of the upper roller holding assembly and screw off the roller system.
- Replace the rollers and re-attach the holding assembly with screws and edged adjusting pin.
- Lower the drum carefully.
- Fit the lateral roller systems to the screen basket (without applying any pressure!) and fix them.
- Carry out a test run.

Make sure when reassembling the roller systems that the gap between roller bearing (1) and Nilos ring (2 and 3) is on both sides completely filled with lubricant.



8.4 Spare parts, components subject to wear

Long life and corrosion resistance against all municipal and most industrial sorts of wastewater as all components which are in contact with water are completely made of stainless steel, acid-treated in a pickling bath and passivated.

a) Wearing parts
Our guarantee does not include wearing parts that are subject to natural wear during operation. Wearing parts are defined as parts that show increased wear due to their function, the degree of wear depending on operational conditions, running hours and plant maintenance.

Main wearing parts of the plant:
Brushes and/or PU seal on screen basket and baffle plate
Screen basket cleaning brush
Bottom bearing bush of screw
Replacement/change at the latest after 8000 operation hours (The machine must be lifted out of channel/tank for bearing change)
Drive shaft support:
Replacement/change at the latest after 8000 operation hours
Oil seals in bottom bearing
RCH1000 shell (machine size 600 – 1800)
Sealing strip of press liquor collection chamber

b) Spare parts
For other spare parts such as gear motor, solenoid valve, etc. see appendix.

Whenever you order spare parts please specify:

Machine type
Size
Order number = machine number
Year of manufacture
Operational voltage of the corresponding electrical component
Order no. from the spare part list (appendix)
Required quantity
Delivery address

8.5 Regular tests of machines

The regular tests for maintenance of the machine's nominal condition shall include after every 4500 operation hours, at least however after three years, checkup of the components listed below. Replace the components, if they show signs of an unacceptable operating condition.

Operating hours	Interval	Subject	Recommended method
4500	3 years	Operating condition: Basket	Check shaft-basket bearing (journal bearing) for play. (Use a lever to check the play.)
4500	3 years	Operating condition: Basket roller bearing	Check for bearing play.
4500	3 years	Operating condition: Screw shaft in rising pipe section: *Size 600 – 1200, L > 7000* *Size 1400 – 1800, L > 8000*	Check bearing shell for wear.
8000	-	Operating condition: Basket	Replacement/change of the screw and drum support Size 2000 and bigger: Replacement/change of the drive shaft support

⚠ CAUTION

There is a danger of burning in the area of the drive motors

NOTICE

Additionally observe the separate operating instructions for electro motors, drives and bearings for maintenance.

⚠ CAUTION

Repair or extensive maintenance work on machines with ex protection should be performed in a separate room on the dismounted machine.

9 Shutdown

Observe the following safety instructions for machine shutdowns to avoid damage to the machine, injuries or environmental damage.

- Qualified staff only is authorized to carry out shutdowns.
- Contact the manufacturer for questions concerning disposal of the machine.
- Disposal of auxiliary material (e.g. gearbox oil): Observe the regulations for eco-friendly waste disposal!
- Lifting and righting of the equipment must be done only by the lifting eyes provided.
- Use only the lifting devices specified hereunder to transport the machine.
- Read also the chapter *Transport*.
- Read also the chapter General Safety Instructions.

9.1 Temporary shutdown

- Clean the screen trough with a high-pressure unit prior to a longer shutdown.
- Let the screen operate for approx. 10 minutes. This will empty the machine, screenings are discharged. The emptying process can be accelerated by throwing polystyrene or ice cubes into the trough while the machine is running until all screenings have been discharged.
- If the machine is installed outdoors the motor should be covered (in order to avoid ingress of water) but not wrapped. Otherwise, water may ingress into the terminal box.
- It is recommended to change the gearbox oil prior to start-up after a several-year shutdown. Further conservation is not necessary.

9.2 Final shutdown / disposal

Qualified staff only is authorized to perform electrical and mechanical shutdowns.
Prior to a final shutdown, follow the instructions for a temporary shutdown and the following additional instructions:

- Drain the press zone completely and clean the press liquor collection chamber.
- If the machine has the plastic press liquor collection chamber, remove the plastic shell and dispose of to waste recycling.
- If the machine has the stainless steel press liquor collection chamber, remove the outer inspection cover.
- Remove then, on either version, the inner cover on the rising pipe to have access to the press zone for cleaning.
- Drain the gearbox oil. Disposal of gearbox oil: Observe the regulations for eco-friendly waste disposal!

10 Additional Information

If you require more information, please write or phone. We will do our best to support you.

Our US headquarters:

Huber Technology, Inc.
9735 NorthCross Center Court STE A
Huntersville, NC 28078

Phone: 1-704-949-1010
Fax: 1-704-949-1020
E-mail: huber@hhusa.net

Our customer service:

Phone: 1-877-US HUBER
E-mail: service@hhusa.net
parts@hhusa.net

We will help you to quickly find the right specialist to answer your questions.

Or visit our website http://www.huber-technology.com providing up-to-date information concerning our Business Unit Service.

Our service comprises **preventive maintenance, routine servicing, and short-term repair**. Our service hotline is available **24 hours a day, 7 days a week.**

Our qualified team offers a customer-oriented and reliable service. This service includes:

- **Installation supervision and start-up service**
- **Operator training**
- **Inspection and preventive maintenance**
- **Fine tuning of equipment for optimum performance**
- **Trouble shooting**
- **Routine and emergency repair**
- **Spare parts**

These additional services guarantee reliable plant operation, which is an important aspect for both municipal and industrial applications, and will help you to meet the requirements within your area of responsibility.

The big difference

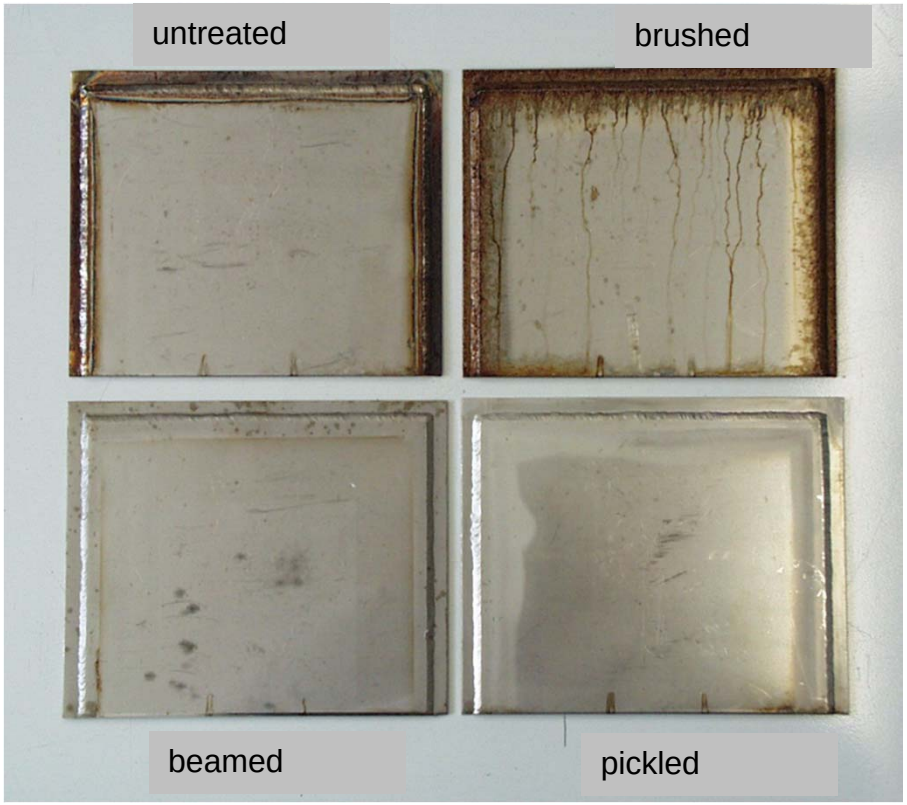
Surface treatment of whole construction

- all cheap competitors use only brush/pickle the welding seam

- no corrosion protection

- combined with carbon steel best conditions for rust

- further investment costs will appear earlier



Pickling: state of the art regarding DWA (ATV) M 168 for wastewater

Corrosion Protection Of Stainless Steel

Corrosion Protection Technologies For Stainless Steel

Resistance to corrosion is only given with a metallically pure, stress-free surface that is as smooth as possible. This requires the elimination of:

- oxide layers, cinder and traces of tarnish
- even the smallest traces of other metals
- chloride-, bromide- and iodine ions
- stresses stemming from mechanical processing

Surface treatment		
Kind of treatment	**Method**	**Dangers**
Blasting	blasting with glass beads	contaminated blasting material
Abrasion	mechanical wear off by means of coarse grain	new surface tension
Pickling	chemical wear off by means of acid	Used up acid
Polishing	electrochemical wear off	Removal of material

Table: surface treatment

The pickling bath is the superior pickling technique

The pickling bath in a central pickling plant has many advantages:

- Treatment for even hard-to-reach areas such as crevices and inside of tubes
- Reduced emission loads
- Reduced environmental pollution
- Automated and free of human errors

Requirements:

- Qualified and well-trained staff
- Technically highly advanced equipment and manufacturing facility
- Waste water treatment and orderly disposal of residual wastes

The Pickling Process:

The stainless steel part gets fully immersed into the pickling bath. It is important to observe:

- The proper concentration of the mixed acids (hydrofluoric acid, nitric acid),
- The addition of acid resistant detergent at the exact concentration,
- Temperature and duration of the pickling bath.

Flushing and Passivation:
After each pickling process it is important to flush thoroughly with water. Potable water with a Cl content of less than 50 ppm is well suited for this purpose. In order to avoid the drying of acid residues which would prevent the formation of a passive layer, all residues of acids have to be removed.

High-pressure washing equipment is advantageous because dissolved cinder and other surface deposits can be removed without the means of any other abrasive mechanical device. Cold water is preferred because its use avoids drying too fast which in turn would lead to the formation of stains.

Within several hours a passive layer with a thickness of about 0,005 µm (five to ten molecule layers) is forming due to the oxygen content in the air. This passive layer is the requirement for the long life of stainless steel.

Techniques of pickling		
Kind of pickling	**Composition**	**For Treatment of**
Spray pickling	pickling acids and detergents	bigger containers and work pieces
Pickling paste	diluents and pickling acid	welding joints and local corrosion
Surface pickling	detergents and orthophosphoric acid	already pickled surfaces
Pickling bath	pickling acids and detergents	complete stainless steel components

Table: techniques of pickling

Detailed description of the pickling plant of the HUBER company:

Ecologically-sound pickling plant for the surface treatment of stainless steels

Image: Flushing and passivation after pickling process

With a processing capacity of over 4,500 t of stainless steel per year, Hans Huber AG in Berching is among the leading stainless steel processing plants in Northern Bavaria. All finished products made of stainless steel have to undergo an appropriate surface treatment: pickling and passivation of the surface. In order to guarantee a constant and consistent treatment, pickling and passivation have to take place in a pickling bath using the immersion method.

The actual pickling process takes place in a pickling pool with a volume of 45 m^3 (1,590 ft^3). This pool volume is necessary in order to pickle even the largest items with the bath method. In the pickling bath processing-related material changes and alterations (caused by edging, welding, or caused by the contact with other materials) are reversed. Especially ferritic inclusions, chromium-carbide formations and changes in the cristalline surface structures are eliminated. Thus, later-occurring types of corrosion that are associated with stainless steel, in particular intercristalline corrosion, grain border corrosion and contact corrosion are avoided.

The pickling solution consists of nitric acid and hydrofluoric acid. The nitric acid serves for the oxidation of undesired materials and inclusions, while the hydrofluoric acid has the purpose of keeping the developing oxides in solution. The content of the etching bath gets constantly circulated while being kept at a constant temperature of 20-30°C (70°F-90°F) through a heat exchanger. The bath is continuously kept free of mechanical pollution by the means of a filter. The pickling bath is always kept closed. It is opened only for loading and unloading. Before the cover is removed waste air is sucked off through slots on the side. The waste air is first cleaned by passing it through filters before it is released into the atmosphere. Thus, the formation of foul smelling odors is prevented.

In a room next to the pickling plant, the pickled stainless steel items are passivated and cleaned off acid residues using spray- and steam pressure installations.

The flushing water is collected in a collection pool. Later, it is centrally removed from there. First the flushing water is neutralized with calcium hydroxide. The addition of the neutralization agent takes places in portions while the pH of the

flushing solution is continuously monitored.

Once neutralized, the flushing water is passed through a heavy metal separator where heays metals are secreted through the action of four consecutive inclined treatment groups that have flocculation compounds (polyacrylamid, polyacrylate) added to them. The heavy metals are removed and drained in a chamber filter press. The filter cake is disposed of in a hazardous waste facility.
Finally, the cleaned waste water can be taken from the neutralization plant. Once again, the pH of the water is measured automatically and is recorded. Additional samples that are examined for their pH-values and heavy metal contents are taken discontinuously from the effluent stream. In this manner, a supplementary running control is guaranteed.

The bottom and the side walls of the entire pickling- and passivation bath are coated with shock-resistant and acid-proof plastic so as to avoid that water from the bath sprays outside.

The residues that reach the canalisation with the effluent water correspond to the regulations:

Cr <= 0,5 mg/l
Cr6 <= 0,1 mg/l
Ni <= 0,5 mg/l
NO_2 <= 5 mg/l
F^2 <= 20,0 mg/l

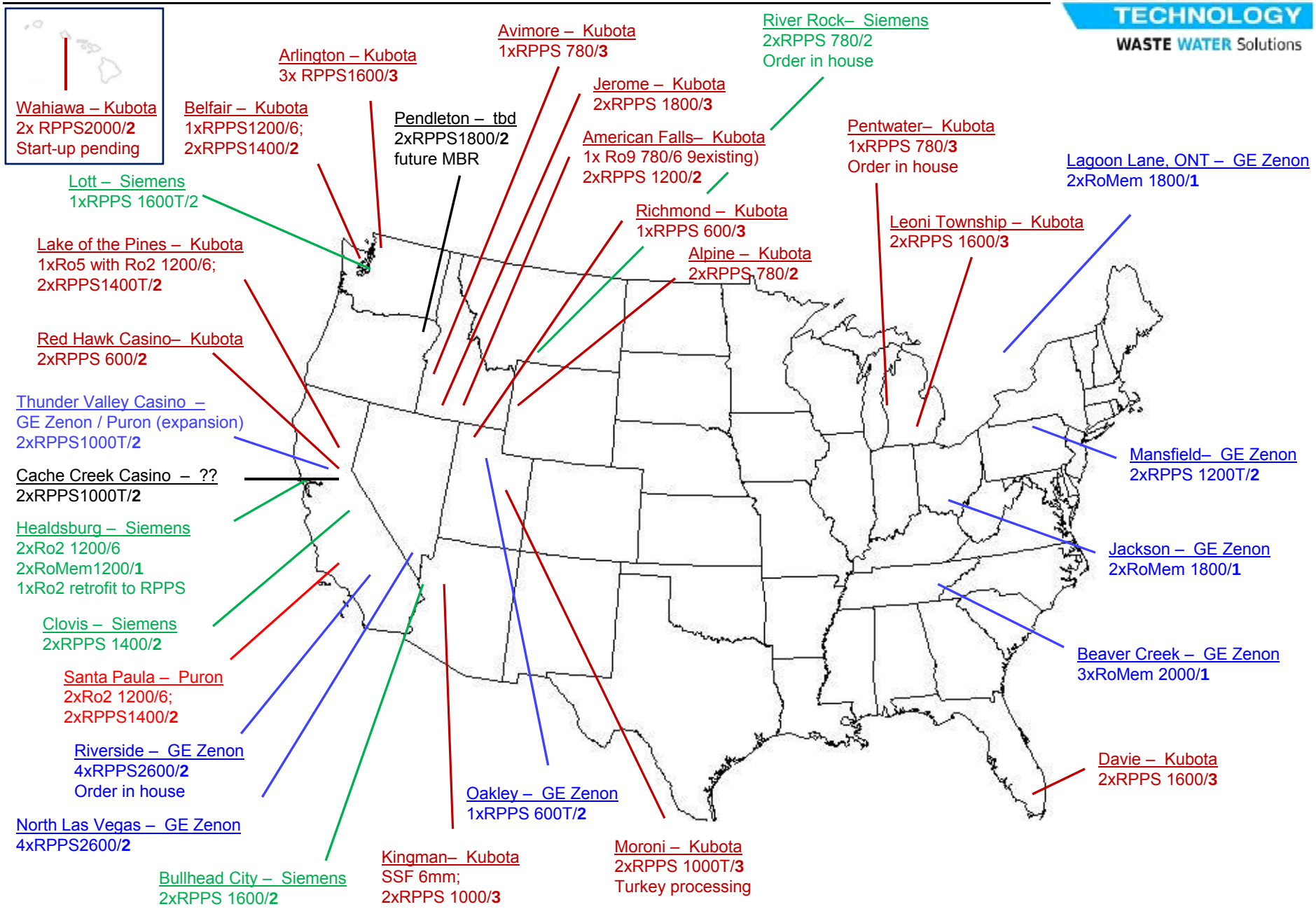
The plant requires a considerable investment of more than EUR 300,000. However Huber believes that only with this plant it is possible to achieve a professional, necessary surface treatment of stainless steel.

Furthermore, Huber believes that our stainless steel products, which have their use in the environmental protection field, should be manufactured in an environmentally friendly way. Our commitment to manufacturing excellence and our environment is shown with our ISO9001 and ISO14001 certifications.

Section V: Equipment References-RPPS

MBR Screen Installations in North America

HUBER TECHNOLOGY
WASTE WATER Solutions



Wahiawa – Kubota
2x RPPS2000/**2**
Start-up pending

Arlington – Kubota
3x RPPS1600/**3**

Belfair – Kubota
1xRPPS1200/6;
2xRPPS1400/**2**

Pendleton – tbd
2xRPPS1800/**2**
future MBR

Avimore – Kubota
1xRPPS 780/**3**

Jerome – Kubota
2xRPPS 1800/**3**

River Rock– Siemens
2xRPPS 780/2
Order in house

American Falls– Kubota
1x Ro9 780/6 9existing)
2xRPPS 1200/**2**

Pentwater– Kubota
1xRPPS 780/**3**
Order in house

Lagoon Lane, ONT – GE Zenon
2xRoMem 1800/**1**

Lott – Siemens
1xRPPS 1600T/2

Richmond – Kubota
1xRPPS 600/**3**

Leoni Township – Kubota
2xRPPS 1600/**3**

Lake of the Pines – Kubota
1xRo5 with Ro2 1200/6;
2xRPPS1400T/**2**

Alpine – Kubota
2xRPPS 780/**2**

Red Hawk Casino– Kubota
2xRPPS 600/**2**

Thunder Valley Casino –
GE Zenon / Puron (expansion)
2xRPPS1000T/**2**

Mansfield– GE Zenon
2xRPPS 1200T/**2**

Cache Creek Casino – ??
2xRPPS1000T/**2**

Healdsburg – Siemens
2xRo2 1200/6
2xRoMem1200/**1**
1xRo2 retrofit to RPPS

Jackson – GE Zenon
2xRoMem 1800/**1**

Clovis – Siemens
2xRPPS 1400/**2**

Beaver Creek – GE Zenon
3xRoMem 2000/**1**

Santa Paula – Puron
2xRo2 1200/6;
2xRPPS1400/**2**

Riverside – GE Zenon
4xRPPS2600/**2**
Order in house

Davie – Kubota
2xRPPS 1600/**3**

Oakley – GE Zenon
1xRPPS 600T/**2**

North Las Vegas – GE Zenon
4xRPPS2600/**2**

Kingman– Kubota
SSF 6mm;
2xRPPS 1000/**3**

Moroni – Kubota
2xRPPS 1000T/**3**
Turkey processing

Bullhead City – Siemens
2xRPPS 1600/**2**

Installation contact sheet

Rotamat® RPPS Drum Screen

Site Photo	Installation detail
	**Bullhead City WWTP, AZ** Contact: Allen Alford (928) 754-5092 Equipment: 2 x RPPS 1600 2mm
	**Jerome WWTP, ID** Contact: John Boyd (208) 324-7122 Equipment: 2 x RPPS 1800 3mm 1 x Ro8t Conveyor
	**Lake of the Pines WWTP, CA** Contact: Wayne Robinson (530) 268 1312 Equipment: 1 x Ro2 1000 6mm 2 x RPPSt 1400 2mm
	**LOTT Alliance WRF, WA** Contact: Brian Topolski (360) 664-2333 ext 1103 Equipment: 1 x RPPSt 1600 2mm
	**Moroni WWTP, UT** Contact: Terry Farnsworth (435) 851-6637 Equipment: 2 x RPPSt 1000 3mm

Order list US installs 88 pieces

german - english
with troughput Qmax
with bar spacing
width
length
with products
mit branch
with country
Order no

Date of order	Product	Postal code	Project	Customer	Country	Size	Order number
04.09.2003	RPPS	US	Belle Plaine	Huber Technology, Inc. USA-28078 Huntersville	USA	1000	283608
28.10.2004	RPPS	US	Robins Air Force Base, USA	HUBER Technology, Inc.	USA	1200	284599
19.08.2005	RPPS	US	Moroni/UT, USA	HUBER Technology, Inc.	USA	1000	285374
19.05.2006	RPPS	US	Moroni II / UT, USA	HUBER Technology, Inc.	USA	1000	286100
08.12.2006	RPPS	US	Bullhead / AZ, USA	HUBER Technology, Inc.	USA	1600	286667
12.03.2007	RPPS	US	Jerome, ID; US	HUBER Technology, Inc.	USA	1800	286896
04.04.2007	RPPS	US	Lake of the Pines - CA, USA	HUBER Technology, Inc.	USA	1400	286962
24.05.2007	RPPS	US	Avimore / ID, USA	HUBER Technology, Inc.	USA	780	287085
14.09.2007	RPPS	US	Foothill Oaks Casino / CA, USA	HUBER Technology, Inc.	USA	600	287442
05.11.2007	RPPS	US	Clovis / CA, USA	HUBER Technology, Inc.	USA	1400	287595
07.11.2007	RPPS	US	Williams / AZ, USA	HUBER Technology, Inc.	USA	1200	287603
11.02.2008	RPPS	US	Corenso WI, US	HUBER Technology, Inc.	USA	600	287882
10.03.2008	RPPS	US	LOTT Olympia, WA; USA	HUBER Technology, Inc.	USA		287969
08.04.2008	RPPS	US	Alpine / WY, US	HUBER Technology, Inc.	USA		288048
05.05.2008	RPPS	US	Oakley / UT, US	HUBER Technology, Inc.	USA	600	288110
05.06.2008	RPPS	US	Redmond / OR, US	HUBER Technology, Inc.	USA		288233
22.08.2008	RPPS	US	Richmond, UT (RPPS); US	HUBER Technology, Inc.	USA	600	288469
31.10.2008	RPPS	US	Santa Paul / CA, US	HUBER Technology, Inc.	USA	1800	288682
08.01.2009	RPPS	US	Leoni Township / MI, US	HUBER Technology, Inc.	USA	1600	288820
25.02.2009	RPPS	US	Sawgrass - St. John's County /	HUBER Technology, Inc.	USA	1200	288952
25.05.2009	RPPS	US	Mansfield / PA, US	HUBER Technology, Inc.	USA	1200	289208
05.06.2009	RPPS	US	Las Vegas-North / NV, US	HUBER Technology, Inc.	USA	2600	289254
10.06.2009	RPPS	US	Thunder Valley / CA, US	HUBER Technology, Inc.	USA	1000	289268
05.10.2009	RPPS	US	Faribault / MN, US	HUBER Technology, Inc.	USA	1800	289599
22.12.2009	RPPS	US	Fruita / CO, US	HUBER Technology, Inc.	USA	1600	289849
13.01.2010	RPPS	US	Sewickley / PA, US	HUBER Technology, Inc.	USA	1200	289866
25.01.2010	RPPS	US	United Water Agawam / MA, US	HUBER Technology, Inc.	USA	780	289890
25.01.2010	RPPS	US	Greenport / NY, US	HUBER Technology, Inc.	USA	780	289891
29.01.2010	RPPS	US	Hernando County / FL, US	HUBER Technology, Inc.	USA	1800	289911
29.01.2010	RPPS	US	Skillman / NJ, US	HUBER Technology, Inc.	USA	780	289914

16.03.2010	RPPS	US	Pendleton / OR, US	HUBER Technology, Inc.	USA	1800	290050
17.03.2010	RPPS	US	Belfair / WA, US	HUBER Technology, Inc.	USA	1200	290057
17.03.2010	RPPS	US	Belfair / WA, US	HUBER Technology, Inc.	USA	1400	290056
21.04.2010	RPPS	US	Magna / UT, US	HUBER Technology, Inc.	USA	1400	290163
09.09.2010	RPPS	US	Kennebunkport / ME, US	HUBER Technology, Inc.	USA	1000	290566
21.10.2010	RPPS	US	Cache Creek/CA, US	HUBER Technology, Inc.	USA	1000	290672
13.01.2011	RPPS	US	Davie / FL, US	HUBER Technology, Inc.	USA	1600	290898
30.03.2011	RPPS	US	Enterprise / AL, US	HUBER Technology, Inc.	USA	1400	291123
21.04.2011	RPPS	US	Holyoke / MA, US	HUBER Technology, Inc.	USA	600	291166
04.07.2011	RPPS	US	Midland / TX, US	HUBER Technology, Inc.	USA	2200	291362
15.09.2011	RPPS	US	Kingman II / AZ, US	HUBER Technology, Inc.	USA	1000	291587
13.12.2011	RPPS	US	Mahomet / IL, US	HUBER Technology, Inc.	USA	1000	291859
11.01.2012	RPPS	US	Wahiawa / HI, US	HUBER Technology, Inc.	USA	2000	291906
13.01.2012	RPPS	US	North Middleton / PA, US	HUBER Technology, Inc.	USA	1200	291922
15.02.2012	RPPS	US	American Falls / ID, US	HUBER Technology, Inc.	USA	1200	292006
17.07.2012	RPPS	US	Boxelder CO, US	HUBER Technology, Inc.	USA	1400	292400
27.07.2012	RPPS	US	River Rock / MT, US	HUBER Technology, Inc.	USA	780	292430
10.08.2012	RPPS	US	Dickinson / ND, US	HUBER Technology, Inc.	USA	1800	292476
28.08.2012	RPPS	US	Pentwater / MI, US	HUBER Technology, Inc.	USA	780	292513
07.09.2012	RPPS	US	Riverside / CA, US	HUBER Technology, Inc.	USA	2600	292548
18.10.2012	RPPS	US	Camp Pendleton / CA, US	HUBER Technology, Inc.	USA	1400	292650
08.11.2012	RPPS	US	Donner Summit / CA, US	HUBER Technology, Inc.	USA	1000	292715
26.04.2013	RPPS	US	Storm Lake / IA, US	HUBER Technology, Inc.	USA	2000	293215

pieces: 88

Welcome user hus-ja

Local Time 20/09/2013, 15:52:42 Seitenname: ReferenzergebnisGesamt
Site problems? Questions?

Order list Worldwide - 350 pieces

Create reference list as excel file!

german - english

- with troughput Qmax
- with bar spacing
- width
- length
- with products
- mit branch
- with country
- Order no

Date of order	Product	Postal code	Project	Customer	Country	Size	Order number
15.04.2003	RPPS	D-86807	Karwendel-Werke	Karwendel-Werke, D-86807 Buchloe	Germany	1000	210757
21.08.2003	RPPS	UK	East Tanfield	Rotamat Limited, GB-Wiltshire SN 14 6NQ	Great Britain	1200	283570
04.09.2003	RPPS	US	Belle Plaine	Huber Technology, Inc. USA-28078 Huntersville	USA	1000	283608
24.10.2003	RPPS	D-01454	Sachsenmilch, KLA Leppersdorf	Sachsenmilkch GmbH An den Breiten Leppersdorf	Germany	1200	210967
15.03.2004	RPPS	UK	Braystones	Rotamat Limited, GB-Wiltshire SN 14 6NQ	Great Britain	1800	284054
15.03.2004	RPPS	UK	Braystones	Rotamat Limited, GB-Wiltshire SN 14 6NQ	Great Britain	1800	284054
28.10.2004	RPPS	US	Robins Air Force Base, USA	HUBER Technology, Inc.	USA	1200	284599
17.11.2004	RPPS	UK	Jedburgh WwTW, GB	Rotamat Limited	Great Britain	1200	284674
05.04.2005	RPPS	DE	Staatl. Molkerei Weihenstephan	Staatliche Molkerei Weihenstephan GmbH Milchstraße 1 Freising	Germany	780	211516
20.04.2005	RPPS	FR	Oisel, F	HUBER TECHNOLOGY Sàrl	France	780	284997
22.04.2005	RPPS	IT	Locorotondo (Puglia), IT	Huber Technology GmbH	Italy	1000	285034
30.05.2005	RPPS	HU	Szentes, HU	HUNICOOP	Hungary	780	285107
01.06.2005	RPPS	ES	Arenas de Iguna, E	HUBER Technology Espana S.L.	Spain	1000	285121
11.07.2005	RPPS	UK	Aberfeldy STW, GB	Rotamat Limited	Great Britain	780	285245
15.07.2005	RPPS	UK	Denny WwTW, GB	Rotamat Limited	Great Britain	1600	285276
01.08.2005	RPPS	UK	Alva STW, GB	Rotamat Limited	Great Britain	1600	285334
04.08.2005	RPPS	BH	North Sitra, Bahrain	UEM MIDEAST FZE	Bahrain	1600	285302
09.08.2005	RPPS	UK	Sandy STW, GB	Rotamat Limited	Great Britain	1400	285346
19.08.2005	RPPS	US	Moroni/UT, USA	HUBER Technology, Inc.	USA	1000	285374

23.08.2005	RPPS	UK	Killearn WwTW, GB	Rotamat Limited	Great Britain	1200	285370
26.09.2005	RPPS	UK	Coalburn WwTW, GB	Rotamat Limited	Great Britain	1400	285474
01.12.2005	RPPS	UK	Luxulyan STW, GB	Rotamat Limited	Great Britain	1200	285680
01.12.2005	RPPS	OM	Al Ansab STP, Oman	VA TECH WABAG LIMITED	Oman	2600	285631
20.02.2006	RPPS	ES	BPB, ES	HUBER Technology Espana S.L.	Spain	780	285866
11.05.2006	RPPS	IT	Genova Quinto (Liguria), IT	Huber Technology GmbH	Italy	1400	286078
19.05.2006	RPPS	US	Moroni II / UT, USA	HUBER Technology, Inc.	USA	1000	286100
09.06.2006	RPPS	ES	PEZ Austral, ES	HUBER Technology Espana S.L.	Spain	600	286158
13.06.2006	RPPS	UK	Ballymoney WWTW, GB	Rotamat Limited	Great Britain	1400	286170
18.07.2006	RPPS	5580	Tamsweg KA	Huber-Edelstahl-Vertriebs-GmbH	Austria	1400	212122
24.10.2006	RPPS	D-26871	Schiffskläranlage - Siebung	Meyer Werft GmbH Challanger Schiff S. 675 Krüger Wabag GmbH Industriegebiet Süd 26871 Papenburg	Germany	600	212217
04.12.2006	RPPS	IT	Limena (Padova), IT	Huber Technology GmbH	Italy	1200	286644
08.12.2006	RPPS	US	Bullhead / AZ, USA	HUBER Technology, Inc.	USA	1600	286667
12.01.2007	RPPS	UK	Dromore WwTW, GB	Rotamat Limited	Great Britain	1400	286724
07.02.2007	RPPS	CN	BEIXAOHE WWTP, CN	Siemens International Trading Ltd.,	China	1800	286821
14.02.2007	RPPS	EE	Narva, new pumping station -	HYDROPRESS Huber AB	Estonia	1200	286841
01.03.2007	RPPS	FI	Keminmaa, FI	HYDROPRESS Huber AB	Finland	780	286861
12.03.2007	RPPS	UK	Dunbar WwTW, UK	Rotamat Limited	Great Britain	1200	286893
12.03.2007	RPPS	US	Jerome, ID; US	HUBER Technology, Inc.	USA	1800	286896
23.03.2007	RPPS	NL	Franeker RWZI, NL	Dutch Spiral BV	Netherland	1600	286937
04.04.2007	RPPS	US	Lake of the Pines - CA, USA	HUBER Technology, Inc.	USA	1400	286962
08.05.2007	RPPS	FR	TRIPOLI - RPPS, FR	HUBER TECHNOLOGY Sàrl	France	1000	287028
24.05.2007	RPPS	US	Avimore / ID, USA	HUBER Technology, Inc.	USA	780	287085
01.06.2007	RPPS	ES	Tudelilla y, ES	HUBER Technology Espana S.L.	Spain	600	287109
12.06.2007	RPPS	ES	Inserplas Spain - Screening,ES	HUBER Technology Espana S.L.	Spain	600	287139
20.07.2007	RPPS	CH	MiMo Suhr, CH	Picatech Huber AG	Switzerland	1000	287268
24.07.2007	RPPS	UK	Easthampstead Park STW, GB	Rotamat Limited	Great Britain	1000	287283

30.07.2007	RPPS	ES	Sabadell Riu Sec, ES	HUBER Technology Espana S.L.	Spain	2000	287301
30.07.2007	RPPS	ES	Sabadell Riu Sec, ES	HUBER Technology Espana S.L.	Spain	2000	287301
27.08.2007	RPPS	IT	Senigallia, IT	Huber Technology GmbH	Italy	1400	287374
14.09.2007	RPPS	US	Foothill Oaks Casino / CA, USA	HUBER Technology, Inc.	USA	600	287442
21.09.2007	RPPS	IT	Aosta (Valle d'Aosta), IT	Huber Technology GmbH	Italy	1600	287463
12.10.2007	RPPS	ZA	Gansbaai WWTP, ZA	Huber Technology (Pty) Ltd.	South Afrika	1000	287545
05.11.2007	RPPS	US	Clovis / CA, USA	HUBER Technology, Inc.	USA	1400	287595
07.11.2007	RPPS	US	Williams / AZ, USA	HUBER Technology, Inc.	USA	1200	287603
14.01.2008	RPPS	AE	Jabel Ali STP, AE	HUBER TECHNOLOGY MIDDLE EAST (FZE)	United Arab Emirates	2200	287791
14.01.2008	RPPS	AE	Jabel Ali STP, AE	HUBER TECHNOLOGY MIDDLE EAST (FZE)	United Arab Emirates	1600	287791
14.01.2008	RPPS	AE	Jabel Ali STP, AE	HUBER TECHNOLOGY MIDDLE EAST (FZE)	United Arab Emirates	3000	287791
11.02.2008	RPPS	US	Corenso WI, US	HUBER Technology, Inc.	USA	600	287882
10.03.2008	RPPS	US	LOTT Olympia, WA; USA	HUBER Technology, Inc.	USA		287969
25.03.2008	RPPS	D-02708	Brauerei Löbau GmbH	Bergquell - Brauerei Löbau GmbH Weststraße 7 02708 Löbau	Germany	780	212665
31.03.2008	RPPS	D-99986	Hainich Konserven GmbH	ATS Anlagentechnik und Sondermaschinenbau GmbH Kammerforster Str. 7 99986 Langula	Germany	780	212672
08.04.2008	RPPS	US	Alpine / WY, US	HUBER Technology, Inc.	USA		288048
17.04.2008	RPPS	ES	Poligono Cantabria, ES	HUBER Technology Espana S.L.	Spain		288087
05.05.2008	RPPS	US	Oakley / UT, US	HUBER Technology, Inc.	USA	600	288110
05.05.2008	RPPS	IT	Siffian, IT	Huber Technology GmbH	Italy	780	288119
14.05.2008	RPPS	D-48727	Dr. Otto Suwelack - Billerbeck	Dr. Otto Suwelack GmbH Nachf. GmbH & Co. KG Magazin (Bauteil 80) Josef-Suwelack-Straße 48727 Billerbeck	Germany	1000	212722
05.06.2008	RPPS	US	Redmond / OR, US	HUBER Technology, Inc.	USA		288233
29.07.2008	RPPS	SE	SCA MUNKSUND, SE	HYDROPRESS Huber AB	Sweden	1600	288400
22.08.2008	RPPS	US	Richmond, UT (RPPS); US	HUBER Technology, Inc.	USA	600	288469
28.08.2008	RPPS	UK	Cranswick Food Ltd., UK	Rotamat Limited	Great Britain	780	288494
14.10.2008	RPPS	MX	Playa del Carmen, MX	Aguas Latinas Mexico	Mexico	1000	288616
31.10.2008	RPPS	US	Santa Paul / CA, US	HUBER Technology, Inc.	USA	1800	288682
04.11.2008	RPPS	AE	Udhailiya STP, KSA	HUBER TECHNOLOGY MIDDLE EAST (FZE)	United Arab Emirates	1000	288686

05.11.2008	RPPS	ES	Granón, ES	HUBER Technology Espana S.L.	Spain	600	288692
07.11.2008	RPPS	CN	Suzhou Wyeth Nutrition, CN	CHEMIC ENGINEERING SERVICES PTE LTD	China	780	288699
08.01.2009	RPPS	US	Leoni Township / MI, US	HUBER Technology, Inc.	USA	1600	288820
25.02.2009	RPPS	US	Sawgrass - St. John's County /	HUBER Technology, Inc.	USA	1200	288952
26.03.2009	RPPS	FI	Metsä Tissue Oyj, FI	HYDROPRESS Huber AB	Finland	1000	289053
12.05.2009	RPPS	UK	Bushmills WwTW, UK	Rotamat Limited	Great Britain	1400	289183
15.05.2009	RPPS	RU	Toljatti, RU	Begarat Vertriebs- u.	Russia	780	289192
20.05.2009	RPPS	CN	Chengbei RPPS, CN	SUMEC INTERNATIONAL TECHNOLOGY	China	1600	289204
25.05.2009	RPPS	US	Mansfield / PA, US	HUBER Technology, Inc.	USA	1200	289208
29.05.2009	RPPS	SA	Rabigh STP, SA	HUBER TECHNOLOGY MIDDLE EAST (FZE)	Saudi Arabia	1000	289232
03.06.2009	RPPS	IT	Carmignano ARA, IT	Huber Technology GmbH	Italy	780	289235
05.06.2009	RPPS	US	Las Vegas-North / NV, US	HUBER Technology, Inc.	USA	2600	289254
10.06.2009	RPPS	US	Thunder Valley / CA, US	HUBER Technology, Inc.	USA	1000	289268
18.06.2009	RPPS	9232	Wörthersee- West	Huber-Edelstahl-Vertriebs-GmbH	Austria	1200	213144
22.06.2009	RPPS	IT	Zaule, IT	Huber Technology GmbH	Italy	780	289300
30.06.2009	RPPS	NL	Essent, NL	Dutch Spiral BV	Netherland	1200	289330
08.07.2009	RPPS	D-15938	Schröter Edelstahltechnik Spez	Schröter Edelstahltechnik Spezial- maschinenbau und Handels GmbH Stadtwall 4 15938 Golßen	Germany	780	213164
11.08.2009	RPPS	IT	Novi Ligure ARA (AL), IT	Huber Technology GmbH	Italy	1400	289455
31.08.2009	RPPS	IT	Valpolcevera (Genova), IT	Huber Technology GmbH	Italy	1400	289500
18.09.2009	RPPS	FI	Metsä Tissue Oyj II, FI	Metsä Tissue Ojy Tehtaankatu Mänttä	Finland	1000	289561
22.09.2009	RPPS	SE	Hagfors kommun, SE	HYDROPRESS Huber AB	Sweden	1600	289573
24.09.2009	RPPS	NZ	Goodman Fielder, NZ	Sindico Ltd	New Zealand	780	289579
30.09.2009	RPPS	US	Arlington / WA, US	HUBER Technology, Inc.	USA	1600	289598
05.10.2009	RPPS	US	Faribault / MN, US	HUBER Technology, Inc.	USA	1800	289599
02.12.2009	RPPS	D-18119	Schiffskläranlagen RPPS	Neptun Werft Werftallee 13 18119 Rostock	Germany	600	213314
15.12.2009	RPPS	ES	Epele, ES	HUBER Technology Espana S.L.	Spain	1400	289820
16.12.2009	RPPS	SE	Ödeshögs inlopp, SE	HYDROPRESS Huber AB	Sweden	1000	289831
22.12.2009	RPPS	US	Fruita / CO, US	HUBER Technology, Inc.	USA	1600	289849
13.01.2010	RPPS	US	Sewickley / PA, US	HUBER Technology, Inc.	USA	1200	289866

25.01.2010	RPPS	US	United Water Agawam / MA, US	HUBER Technology, Inc.	USA	780	289890
25.01.2010	RPPS	US	Greenport / NY, US	HUBER Technology, Inc.	USA	780	289891
29.01.2010	RPPS	US	Hernando County / FL, US	HUBER Technology, Inc.	USA	1800	289911
29.01.2010	RPPS	US	Skillman / NJ, US	HUBER Technology, Inc.	USA	780	289914
08.03.2010	RPPS	AE	Saadiyat Island STP, AE	HUBER TECHNOLOGY MIDDLE EAST (FZE)	United Arab Emirates	1600	290009
11.03.2010	RPPS	CN	Buji, CN	Yixing Huadu Huber Environmental	China	2200XL	290028
16.03.2010	RPPS	VN	Halico Liquor, VN	Professor Dr.-Ing. Dr. rer. pol.	Vietnam	1000	290048
16.03.2010	RPPS	US	Pendleton / OR, US	HUBER Technology, Inc.	USA	1800	290050
16.03.2010	RPPS	D-	Halico Liquor, VN	Professor Dr.-Ing. Dr. rer. pol.	Vietnam	1000	290572
17.03.2010	RPPS	US	Belfair / WA, US	HUBER Technology, Inc.	USA	1200	290057
17.03.2010	RPPS	US	Belfair / WA, US	HUBER Technology, Inc.	USA	1400	290056
22.03.2010	RPPS	IT	Borghetto Santo Spirito, IT	Huber Technology GmbH	Italy	1600	290065
01.04.2010	RPPS	SE	Kosta / Lessebo, SE	HYDROPRESS Huber AB	Sweden	1000	290104
14.04.2010	RPPS	SA	Maymana STP, SA	HUBER TECHNOLOGY MIDDLE EAST (FZE)	Saudi Arabia	600	290134
21.04.2010	RPPS	US	Magna / UT, US	HUBER Technology, Inc.	USA	1400	290163
22.06.2010	RPPS	FI	Hankasalmi II, FI	HYDROPRESS Huber AB	Finland	780	290333
14.07.2010	RPPS	SE	Ahlsells/Strömsunds Kmn, SE	HYDROPRESS Huber AB	Sweden	1200	290409
31.08.2010	RPPS	AR	El Jaguel, AR	DYCASA SOCIEDAD ANONIMA	Argentina	1800	290536
06.09.2010	RPPS	FR	FRAIZE, FR	HUBER TECHNOLOGY Sàrl	France	780	290547
09.09.2010	RPPS	US	Kennebunkport / ME, US	HUBER Technology, Inc.	USA	1000	290566
15.09.2010	RPPS	BR	Capivari II, BR	Odebrecht Servicos de Engenharia e	Brazil	2200XL	290583
21.10.2010	RPPS	US	Cache Creek/CA, US	HUBER Technology, Inc.	USA	1000	290672
09.12.2010	RPPS	D-90522	Oberasbach KA	Stadt Oberasbach	Germany	1200	213655
13.01.2011	RPPS	US	Davie / FL, US	HUBER Technology, Inc.	USA	1600	290898
24.01.2011	RPPS	IT	Borhetto Santo Spirito II, IT	Huber Technology GmbH	Italy	1600	290919
31.01.2011	RPPS	D-	Krefeld KA	EAG GmbH & Co.KG	Germany	1200	213693
04.02.2011	RPPS	D-	Mia Milia, CY	WTE Wassertechnik GmbH	Germany	1800	290951
23.02.2011	RPPS	BH	Ma'Amir STP, BH	HUBER TECHNOLOGY MIDDLE EAST (FZE)	Bahrain	1200	291006
16.03.2011	RPPS	SE	Utanbergsvallarna, SE	HYDROPRESS Huber AB	Sweden	1000	291082
16.03.2011	RPPS	SE	Utanbergsvallarna, SE	HYDROPRESS Huber AB	Sweden	1000	291082

30.03.2011	RPPS	US	Enterprise / AL, US	HUBER Technology, Inc.	USA	1400	291123
07.04.2011	RPPS	FI	Koskisen Oy, FI	Koskisen Oy Otavantie Hirvensalami	Finland	600	291139
21.04.2011	RPPS	US	Holyoke / MA, US	HUBER Technology, Inc.	USA	600	291166
18.05.2011	RPPS	D-26871	Schiffs-KA - Meyer Werft S691	Meyer Werft GmbH S691 REWO Industriegebiet Süd 26871 Papenburg	Germany	600	213795
18.05.2011	RPPS	D-26871	Schiffs-KA - Meyer Werft S691	Meyer Werft GmbH S691 REWO Industriegebiet Süd 26871 Papenburg	Germany	600	213795
25.05.2011	RPPS	IT	Cesano Maderno, IT	Huber Technology GmbH	Italy	780	291256
14.06.2011	RPPS	SI	Novo Mesto, SI	Okolje Consulting D.O.O.	Slovenia	2000	291305
04.07.2011	RPPS	DK	Lundtofte, DK	Molleavaerket A/S	Denmark	1800	291363
04.07.2011	RPPS	US	Midland / TX, US	HUBER Technology, Inc.	USA	2200	291362
18.07.2011	RPPS	NL	Chaam RWZI, NL	Dutch Spiral BV	Netherland	1200	291412
29.08.2011	RPPS	NO	Fjellfoten RA, NO	HYDROPRESS Huber AB	Norway	1000	291543
02.09.2011	RPPS	SE	Södra Cell Värö, SE	Södra Cell AB Södra Cell Värö Väröbacka	Sweden	780	291562
15.09.2011	RPPS	US	Kingman II / AZ, US	HUBER Technology, Inc.	USA	1000	291587
04.10.2011	RPPS	UK	Port Edgar (South Queensferry)	Rotamat Limited	Great Britain	1600	291636
04.10.2011	RPPS	UK	Port Edgar (South Queensferry)	Rotamat Limited	Great Britain	1600	291636
13.12.2011	RPPS	US	Mahomet / IL, US	HUBER Technology, Inc.	USA	1000	291859
11.01.2012	RPPS	US	Wahiawa / HI, US	HUBER Technology, Inc.	USA	2000	291906
13.01.2012	RPPS	US	North Middleton / PA, US	HUBER Technology, Inc.	USA	1200	291922
08.02.2012	RPPS	IT	Trento Nord, IT	Huber Technology GmbH	Italy	1400	291988
15.02.2012	RPPS	US	American Falls / ID, US	HUBER Technology, Inc.	USA	1200	292006
07.03.2012	RPPS	IT	Santa Teresa di Gallura, IT	Huber Technology GmbH	Italy	1200	292053
26.03.2012	RPPS	BR	Capivari II, BR	Construtora Norberto Odebrecht	Brazil	2200XL	292112
05.04.2012	RPPS	SE	Avasjö ARV, SE	HYDROPRESS Huber AB	Sweden	780	292132
27.04.2012	RPPS	SE	Falköping Biogas, SE	HYDROPRESS Huber AB + Heljesvägen 4 Lindome	Sweden	780	292186
30.05.2012	RPPS	CH	Otelfingen, CH	Picatech Huber AG	Switzerland	1000	292273
05.06.2012	RPPS	SE	Vilhelmina ARV/Feros AB, SE	HYDROPRESS Huber AB	Sweden	1000	292292
05.06.2012	RPPS	ZA	Wemmershoek WWTW, ZA	Huber Technology (Pty) Ltd.	South Afrika	1000	292294
29.06.2012	RPPS	RO	Cluj, RO	UTI Grup SA	Romania	2600	292365
29.06.2012	RPPS	RO	Cluj, RO	UTI Grup SA	Romania	2600	292365
17.07.2012	RPPS	US	Boxelder CO, US	HUBER Technology, Inc.	USA	1400	292400
27.07.2012	RPPS	US	River Rock / MT, US	HUBER Technology, Inc.	USA	780	292430

06.08.2012	RPPS	IT	Mariano Comense (Lombardia),IT	Huber Technology GmbH	Italy	1000	292457
10.08.2012	RPPS	US	Dickinson / ND, US	HUBER Technology, Inc.	USA	1800	292476
16.08.2012	RPPS	SE	Karlskoga/AggerudsARV /ElvaAB,	HYDROPRESS Huber AB	Sweden	1800	292488
28.08.2012	RPPS	US	Pentwater / MI, US	HUBER Technology, Inc.	USA	780	292513
07.09.2012	RPPS	US	Riverside / CA, US	HUBER Technology, Inc.	USA	2600	292548
18.10.2012	RPPS	US	Camp Pendleton / CA, US	HUBER Technology, Inc.	USA	1400	292650
25.10.2012	RPPS	IT	Vercelli-Piemonte, IT	Huber Technology GmbH	Italy	1200	292670
08.11.2012	RPPS	US	Donner Summit / CA, US	HUBER Technology, Inc.	USA	1000	292715
23.11.2012	RPPS	SE	Forsmark, SE	HYDROPRESS Huber AB	Sweden	780	292755
27.11.2012	RPPS	8850	Murau, ARA	HUBER Edelstahlvertriebs-GmbH	Austria	1200	214281
10.01.2013	RPPS	CA	Mendora Street / ON, CA	HUBER Technology, Inc.	Canada	780	292931
29.01.2013	RPPS	GB	WRG Wrexham RoSF5	Rotamat Linted	Great Britain	1400	292826
07.03.2013	RPPS	SE	Hallstavik, SE	HYDROPRESS Huber AB	Sweden	1400	293107
13.03.2013	RPPS	AE	KAUST Research Park, AE	HUBER TECHNOLOGY MIDDLE EAST (FZE)	United Arab Emirates	1400	293117
28.03.2013	RPPS	TR	Makro Co. Ankara Bagram, TR	Dr. Mete Gercek	Turkey	1400	293157
15.04.2013	RPPS	AE	Al Montazah-Sharm El Sheikh,EG	HUBER TECHNOLOGY MIDDLE EAST (FZE)	Egypt	1000	293187
15.04.2013	RPPS	AE	Al Montazah-Sharm El Sheikh,EG	HUBER TECHNOLOGY MIDDLE EAST (FZE)	Egypt	1000	293187
26.04.2013	RPPS	US	Storm Lake / IA, US	HUBER Technology, Inc.	USA	2000	293215
29.04.2013	RPPS	BR	Petrobras Comperj, BR	VWS BRASIL LTDA	Brazil	780	293219
08.05.2013	RPPS	NZ	Blenheim, NZ	Sindico Ltd	New Zealand	1200	293247
08.07.2013	RPPS	AE	Forsan foods Factory, SA	HUBER TECHNOLOGY MIDDLE EAST (FZE)	Saudi Arabia	780	293421
12.07.2013	RPPS	IN	Ford India, IN	A.T.E. Enterprises Private Limited	India	780	293427
25.07.2013	RPPS	FR	GUENEAU (51), FR	HUBER TECHNOLOGY Sàrl	France	1000	293457
09.08.2013	RPPS	BO	Planta Sur Saguapac, BO	COOPERATIVA DE SERVICIOS PÚBLICOS	Bolivia	1800	293501
21.08.2013	RPPS	SE	Finspang, SE	HYDROPRESS Huber AB	Sweden	1200	293532
26.08.2013	RPPS	RU	Gagarin-Ostankino, RU	OOO "Gagarin-Ostankino"	Russia	1200	293544
10.09.2013	RPPS	RU	Odintsovo, RU	OOO Ecosprom	Russia	1600	293581
17.09.2013	RPPS	FR	ISOLA 2000, FR	HUBER TECHNOLOGY Sàrl	France	780	293603
19.09.2013	RPPS	NO	Nortura Rudshögda, NO	HYDROPRESS Huber AB	Norway	1000	293617

09.10.2013	RPPS	UY	Curtiembre Paris S.A., UY	Curtiembre Paris S.A.	Uruguay	780	293690
05.11.2013	RPPS	US	Latroph / CA, US	HUBER Technology, Inc.	USA	1400	293771
05.11.2013	RPPS	US	Latroph / CA, US	HUBER Technology, Inc.	USA	1400	293771
13.11.2013	RPPS	IT	Recco, IT	Huber Technology GmbH	Italy	1400	293788
25.11.2013	RPPS	SE	Turku, FI	HYDROPRESS Huber AB	Finland	780	293803
03.12.2013	RPPS	US	Franklin Township / PA, US	HUBER Technology, Inc.	USA	1400	293832
17.12.2013	RPPS	PL	Konstancin-Jeziorna, PL	Huber Technology sp.z.o.o	Poland	1600	293880
19.12.2013	RPPS	AR	Canuelas, AR	Serviur S.A. Ingenieria Ambiental	Argentina	1600	293898
13.01.2014	RPPS	US	Nisqually / WA, US	HUBER Technology, Inc.	USA	1000	13000040
24.01.2014	RPPS	FI	Kuhmo, FI	HYDROPRESS Huber AB	Finland	780	13000095
07.02.2014	RPPS	SE	Lindholmen, SE	HYDROPRESS Huber AB	Sweden	1400	13000152
17.02.2014	RPPS	9912	Anras KA	HUBER Edelstahlvertriebs-GmbH	Austria	1200	13000178
25.02.2014	RPPS	US	Oxford / ME, US	HUBER Technology, Inc.	USA	780	13000218
27.02.2014	RPPS	AU	CIP COLE, AU	Hydroflux Industrial Pty Ltd	Australia	1000	13000236
09.04.2014	RPPS	CH	Frigemo Cressier, CH	Picatech Huber AG	Switzerland	780	13000416
10.04.2014	RPPS	US	Deltona / FL, US	HUBER Technology, Inc.	USA	1600	13000424
15.04.2014	RPPS	8952	Irdning, ARA	HUBER Edelstahlvertriebs-GmbH	Austria	600	13000447
30.04.2014	RPPS	PL	AGRO-DANMIS SP.J., PL	Huber Technology sp.z.o.o	Poland		13000507
09.05.2014	RPPS	FR	EGAT (66), FR	HUBER TECHNOLOGY Sàrl	France	780	13000514
19.05.2014	RPPS	HU	Kunfeherto, HU	UTB Envirotec Zrt	Hungary	600	13000550
26.05.2014	RPPS	FR	Ota Porto (2A), FR	HUBER TECHNOLOGY Sàrl	France	780	13000590
11.06.2014	RPPS	US	Visalia, CA; US	HUBER Technology, Inc.	USA	2400	13000665
24.06.2014	RPPS	NI	Granada, NI	Puritec GES Corp.	Nicaragua	1400	13000707
30.06.2014	RPPS	US	Stonegate / CO, US	HUBER Technology, Inc.	USA	1400	13000761
30.06.2014	RPPS	US	Stonegate / CO, US	HUBER Technology, Inc.	USA	1400	13000761
07.07.2014	RPPS	QA	Jamiliyah PTP, QA	Melfi Srl	Qatar	780	13000798
07.07.2014	RPPS	QA	Jamiliyah PTP, QA	Melfi Srl	Qatar	780	13000798
21.07.2014	RPPS	ES	Rio Iregua, ES	HUBER Technology Espana S.L.	Spain	1600	13000855
21.07.2014	RPPS	IT	Zevio, IT	Huber Technology GmbH	Italy	1000	13000856
28.07.2014	RPPS	US	Fresno / CA, US	HUBER Technology, Inc.	USA	1600	13000884
31.07.2014	RPPS	D-1454	Sachsenmilch Leppersdorf	wks Technik GmbH	Germany	1200	13000913
17.09.2014	RPPS	US	Wapato / WA, US	HUBER Technology, Inc.	USA	1200	13001074
06.10.2014	RPPS	US	Williston / ND, US	HUBER Technology, Inc.	USA	1800	13001155

07.10.2014	RPPS	UY	Nirea Lineas Rojas, UY	Nirea Frigorifico San Jacinto	Uruguay	1400	13001156
20.10.2014	RPPS	US	Chino Valley / AZ, US	HUBER Technology, Inc.	USA		13001212
23.10.2014	RPPS	IT	Santa Magherita Ligu, IT	Huber Technology GmbH	Italy		13001236

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Welcome user us-aj

Local Time 21/11/2014, 20:17:58 Seitenname: ReferenzergebnisGesamt
Site problems? Questions?

Section VI: Service Capability Statement

HUBER TECHNOLOGY CAPABILITY STATEMENT

Huber Technology, Inc Service Department

To our potential customer,

As you consider various technologies for your wastewater treatment application, cost of the equipment as well as proper sizing and implementation are a critical component in the decision making process. However, sometimes how the machine is cared for after installation is not as closely scrutinized as it should be and maybe overlooked.

I would like to take a moment to discuss features of what I like to call the *Huber Experience*. What I mean by this is; from the moment you make an initial inquiry through the entire useable service life of the equipment, Huber Technology is committed to support you through the entire lifecycle of the equipment. This is backed up by five generations of tradition that demands that we take care of you, our customer. This is something that I observe as severely lacking and much in demand in our industry today.

Telephone: 704-949-1010 **Service Direct** 704-949-1015
FAX: 704 949 1020 **E-mail:** service@hhusa.net
www.huber-technology.com

My role as the Service Group Manager for Huber Technology, Inc is to assure that you are provided with the best possible service to maintain your investment in our technology. How I am accomplishing that for you is by maintaining an on-call staff of highly trained service technicians. Currently I have three full time field technicians that operate from our headquarters located in Huntersville, NC and one more will start in September. We are involved not only in equipment startup and field repair but are also actively providing preventative maintenance contracts as well as specialized installation assistance. In addition I have the resource of our worldwide service group of 40 experienced technicians to call on for projects that require additional skilled hands. I have several examples where City staff used their in-house resources to retrofit an existing installation and we provided side-by-side service to assure proper fit and installation.

Parts availability is key to the effective operation of any process machinery. As the word *process* implies, other components down stream are dependant on the functioning of the technology. Therefore proper planning of service combined with timely access to mission critical components will make the difference. Huber Technology, Inc., through the help of our Parts Manager, maintains a parts warehouse, also located at our Huntersville, NC headquarters. Here we maintain a stock of the most common wear items of the technology that we put out into the field. Beyond that our department works with you to set you up with a proper stock of parts that you should maintain at your site to allow for your immediate response on select wear items. Because we are the original manufacture of the equipment (not a licensee) you also have the most direct connection to solve any major component issue.

You are our priority. Your satisfaction is our bottom line. Please contact me and let us discuss how you can get in on the *Huber Experience!*

We look forward to working with you.

Sincerely,

Henk-Jan van Ettekoven
Service Group Manager
Direct: 704-949-1015
Phone: 704-949-1010
Fax: 704-949-1020
E-mail: henk@hhusa.net
www.huber-technology.com

Section VII: Warranty Statement

Warranty

HUBER Technology, Inc. a member of the HUBER Group warrants all screens, conveyance equipment, and parts manufactured by it to be free from defects in workmanship or materials for a period of one (1) year from the date of start-up, provided that in no event shall this warranty extend more than eighteen (18) months from date of delivery from the factory of Hans Huber SE, Germany. If, during said warranty period, any screens, conveyance equipment or parts manufactured by said companies prove to be defective in workmanship or material under normal use and service, and if such equipment or parts are found to be defective by an authorized representative or a factory member of the Huber Group, they will be replaced or repaired free of charge.

The Huber Group or its affiliates assumes no liability for the consequential damages of any kind and the purchaser by acceptance of delivery assumes all liability for the consequences of the use or misuse of the Huber Group products by the purchaser, his employees or others. The Huber Group or affiliates will not be held responsible for travel expenses, rented equipment, outside contractor's fees, or unauthorized repair service or parts.

The warranty shall not apply to any product or part of product which has been subjected to misuse, accident, negligence or used in a manner contrary to The Huber Group or affiliates printed instructions or damage due to a defective power supply, improper electrical protection or faulty installation or repair. Wear caused due to corrosive fluids is not covered in this warranty.

The HUBER Technology sole warranty and in lieu of all other warranties, expressed or implied, which are hear by excluded including in particular all warranties of merchantability or fitness for a particular purpose.

HUBER Technology neither assumes, nor authorizes any person or company to assume for it, any other obligation in connection with the sale of its equipment with the exception of a valid Huber Group guarantee or extended warranty, if applicable. Any other enlargement or modification of this warranty by a representative or other selling agent shall be his exclusive responsibility.

HUBER Technology, Inc.