

Quotation

NUMBER: B020rev3

DATE: August 23, 2021

TO:

REF.: Corona, CA WWTP #1
Pre-Filter Screen

Parkson Corporation is pleased to provide a quotation for the following equipment.

ITEM 1 EQUIPMENT

One (1) Aqua Guard® Ultra Clean™ self-cleaning bar/filter screen model AGUC-MN-A

1.A Equipment Description:

1. Unit shall be 5'-0" wide (W) and designed for installation in a channel 6'-0" wide x 9'-0" deep (H). Solids larger than 3 mm nominal screen opening shall be removed from the flow and conveyed to a discharge point approximately 4'-0" above the top of the channel. When installed, the screen shall be inclined 85° from the horizontal and have a total discharge height (H1) of 13'-0" (as measured from the base of the screen to the discharge point).
2. Units shall be capable of passing a peak flow of 16 MGD. The head loss across the screen at this flow will not exceed 13" assuming a downstream water level of 3'. The head loss calculation is based on assumption of a clean screen, clean water and **steady state flow**.
3. Materials of construction will be as follows:
Frame: Type 316 stainless steel, 3/16" thick.
Filter elements: High impact plastic.
Side plates: High impact plastic.
Shafts, chain links, guide rails, drive sprocket inserts: Type 316 stainless steel.
Rollers: 400 series stainless steel (heat treated).
Chain bushings: 400 series stainless steel (heat treated).
Side seals: Neoprene rubber, with type 316 stainless steel backing plates.
4. Screen drive with a 1 HP, 230/460V, 3 Ø, 60 Hz TEFC motor.
5. Manifold lubrication system.
6. Screen washing system consisting of two (2) type 316 stainless steel spray bars with quick release spray nozzles and NEMA 4X brass body solenoid valve with a 1-1/2" NPT connection.
7. Brush assembly of hybrid construction, with a side mounted door to provide access for brush replacement.
8. Brush drive with a 1.5 HP, 230/460V, 3 Ø, 60 Hz TEFC motor.
9. Electrical overload device consisting of SSAC current monitors.
10. Front and rear covers fabricated of 14 gauge type 316 stainless steel, to enclose the portion of the screen above the channel.
11. Discharge chute fabricated of 14 gauge type 316 stainless steel, to direct screenings into the washer/compactor inlet chute.
12. E-stop pushbutton in a NEMA 4X polycarbonate enclosure.
13. Main control panel furnished in a NEMA 4X type 316 stainless steel enclosure, housing controls for the screen and washer/compactor. To include the following:
1 - Enclosure, NEMA 4X, 316 Stainless Steel, Wall Mount
1 - Main Disconnect, with Door Interlocked Handle

- 3 - Motor Circuit Breaker Protection
- 2 - Motor Starter, NEMA, Non-Reversing, w/Overload Relay [Screen, Brush]
- 1 - Motor Starter, NEMA, Reversing, w/Overload Relay [Wash Press]
- 3 - Current monitors, SSAC type
- 1 - Control power transformer, 480-120VAC
- 1 - Lot, 120VAC circuit breakers
- 1 - Surge Protection, 120VAC
- 1 - PLC, Allen-Bradley CompactLogix with L33ER CPU, Ethernet/IP, and Required I/O
- 1 - Operator Interface, Allen-Bradley PanelView 4" display
- 1 - Ethernet switch, 5-Port, unmanaged type
- 1 - Power supply, 24VDC
- 1 - UPS battery backup
- 1 - Air conditioner
- 3 - Elapsed Time Meter in the operator interface
- 1 - Heater with thermostat
- 1 - Lot, Push buttons, [As Required]
- 1 - Lot, Pilot lights, Transformer Type [As Required]
- 1 - Lot, Selector switches, [As Required]
- 1 - Lot, Control relays, socket type
- 1 - Lot, Terminal blocks, [As Required]
- 1 - Lot, Dry contacts for remote monitoring [As Required]
- Differential level controller assembly:
 - 1 - HydroRanger 200 HMI, NEMA 4X, Fiberglass
 - 2 - Transducers, with 10m cable

NOTE: Customer is responsible for installing the control panel in a shaded structure.

NOTE: Final drawings of the existing site will be needed for confirmation of dimensions as proposed.

ITEM 2 SERVICES

2.A Drawings and Installation, Operation and Maintenance (IO&M) Manuals:

- | | | |
|----|---------------------|-------------------|
| 1. | Approval drawings: | 2 prints included |
| 2. | Certified drawings: | 2 prints included |
| 3. | IO&M manuals: | 2 included |

2.B Start-Up Assistance:

Parkson will furnish a factory representative for a total of two (2) days during one (1) trip to the jobsite to assist in installation inspection, start-up supervision, and operator training. Dates of service to be scheduled upon Purchaser's written request.

2.C Mechanical Warranty:

Per Section XVI of the Standard Conditions of Sale.

PURCHASE PRICE:

All of the above for **\$293,994.72.**
Equipment \$261,248, Tax (7.75%) \$20,246.72, Freight \$7,500, Service \$5,000
F.O.B. shipping point, freight included, taxes excluded.

VALIDITY:

Purchase Price is valid for sixty (60) days from quotation date, for shipment of equipment within the timetable stated below.

PAYMENT TERMS:

90% net 30 days after shipment, 10% not to exceed 120 days after delivery.

TIMETABLE GUIDELINE:

Within ten (10) business days of receiving a written Purchase Order in Parkson's office, if necessary, Parkson will submit a written Request for Additional Information requesting items including, but not limited to, full-scale drawings, specification sections, amendments and other documents necessary for Parkson to begin work on this Project. No work can be done on this Project until all Additional Information is received by Parkson, thus beginning the Submittal Phase. If you do not receive such a Request for Additional Information within the stated ten (10) business days, then the Submittal Phase will begin on the eleventh (11th) business day following receipt of the written Purchase Order in Parkson's office. The Shipment Phase is thereafter contingent upon your final approval of all submitted Approval Drawings. Once said final approval is received in Parkson's offices, the Shipment Phase will begin.

Submittal Phase: Approval drawings will be submitted six (6) weeks from receipt of all requested Additional Information if necessary, or if not necessary, from the eleventh (11th) business day following receipt of a written Purchase Order in Parkson's office.

Shipment Phase: Sixteen (16) weeks following receipt of final approval of all submitted Approval Drawings in Parkson's office.

If the Submittal Phase is waived, the Shipment Phase will begin on receipt of all requested Additional Information if necessary, or if not necessary, on the eleventh (11th) business day following receipt of a written Purchase Order in Parkson's offices.

Dates are subject to confirmation upon receipt of written Purchase Order.

TERMS AND CONDITIONS:

This Quotation is governed by and subject to Parkson's Standard Conditions of Sale, which are incorporated by reference and accessible at: <http://www.parkson.com/files/documents/Sales-conditions.pdf>.

BUYER/OWNER RESPONSIBILITY:

- Anchor bolts.
- Spare parts.
- Washer compactor.
- Concrete or steel supports.
- Local disconnects or junction boxes.
- Level sensor mounting pipe.
- Control panel supports or mounting.
- Control panel sun shield or air conditioning.
- Spray wash water connection and piping.

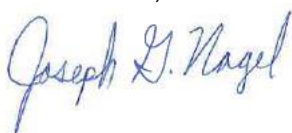
- Heat tracing and power for heat tracing of spray wash water piping.
- Drain connections and piping.
- Manual shutoff valves, gate valves, check valves, butterfly valves, Y-strainers.
- Pressure gauges.
- Screenings dumpster.
- Lubricants.
- Shop or field painting.
- Unloading, uncrating, installation and installation supervision. Installation will, at minimum, require a forklift and possibly a crane/hoist.
- Readiness of the equipment before requesting start-up service. Non-readiness may incur additional charges.
- Electrical connection and interconnecting wiring (including any of the following: Solenoid valves, level sensors, motors, E-stop, main controls); wiring and conduit from each unit-mounted electrical device to a terminal box or control panel.
- Interconnecting piping.
- Piping connections, platforms, ladders, gratings and railings unless stated otherwise.
- Determining the compatibility of equipment materials of construction and process conditions (air and water) is the responsibility of the owner and/or consulting engineer. Note that even relatively low levels of H₂S and/or Chlorides can cause corrosion of 304SS and thus it is important for the owner and/or consulting engineer to pay particular attention to materials suitability for the specific water/wastewater in which the equipment will be operated. Higher grades of stainless steel like 316 are options.
- Any other auxiliary equipment or service not detailed above.

Please return one signed copy of this Quotation, or your Purchase Order, to Parkson Corporation at the address below. Refer to this Quotation, date, and related correspondence.

Issued By:

PARKSON CORPORATION

562 Bunker Court
Vernon Hills, IL 60061



Name: Joseph G. Nagel
Title: Municipal Sales
Date: August 23, 2021

Accepted By: (Herein called the Buyer)

Name
Title:
Date:



August 16, 2021

PROPOSAL

Project Location: Corona, CA
Plant #1
Tertiary Filter Screenings Handling

Vulcan Representative: Matt Rebmann
The Coombs-Hopkins Co.
matt@chcwater.com

Prepared by: Andrew Synhorst, PE
Sales Manager
andrew@vulcanindustries.com

Vulcan Industries, Inc. is pleased to provide you with our proposal for One (1) ESP 250/1200 Screw Press to receive screenings from the Parkson AquaGuard Tertiary Filter Screen for the above referenced project.

Scope of Supply – One (1) Vulcan Model ESP 250/1200 Screw Press:

- ✓ Type 316 stainless steel construction.
- ✓ Inlet hopper to receive screenings from a Parkson AquaGuard with a discharge height above the operating floor of 4'-0".
- ✓ Discharge piping.
- ✓ Stainless steel axial thrust bearing to handle all loads created during compaction and reversal of the screw as well as fully support and allow the screw to be cantilevered inside the press body.
- ✓ Hollow shafted alloy steel screw with an outside diameter of 8-1/2" and 3/4" thick flighting.
- ✓ Nylon brush attached to screw flighting in the drain area.
- ✓ Integral 1/4" thick stainless steel drain section with 2 mm slotted openings.
- ✓ 5.0 HP TEFC motor.
- ✓ One (1) NEMA 4X, 304 stainless steel local and main combined control station with HAND-OFF-AUTO, FORWARD-OFF-REVERSE selector switches and INITIATE and E-STOP pushbuttons. Control components to include, but not limited to relay logic, reversing starter, current sensing relay (CSR) and all necessary relays, pilot lights, switches and internal wiring.
 - Dry contact communication with associated Parkson Main Control Panel. Signals TO Parkson Panel include "Press in Auto," "Press Common Fail," and "Press Running." Signals FROM Parkson Panel include "Screen Running."
 - Parkson Main Control Panel to communicate dry contact signals to plant SCADA with Ethernet IP.
 - See included wiring diagram and example panel layout included in the Appendix.



- ✓ One (1) machine mounted wash water valve manifold assembly consisting of one (1) solenoid valve and one (1) ball valve.
- ✓ Press Capacity: Up to 99 cu.ft./hr.
- ✓ Freight to jobsite.
- ✓ Approx. washing press weight: 1,000 lbs.
- ✓ No startup services provided.
- ✓ Full 1-year warranty from date of operational start-up.

Note: Price does not include installation, wiring and conduit between controls, ancillary devices, and equipment not explicitly called out in this proposal, or anything else not identified in this proposal.

Equipment submittal drawings to be completed 6-8 weeks after receipt of purchase order.

Equipment delivery to occur 20-26 weeks after receipt of approved submittal drawings.

The Buyer shall accept this quotation within 60 days from the date shown at the top of page 1 of this quotation by letter of intent or purchase order with payment terms that conform to the Terms and Conditions for Quotation or Sale, Sheet STC-001. Price is subject to change without notice after this interval.

TOTAL LUMP SUM PRICE FOR PREVIOUSLY DESCRIBED SCOPE: \$65,794.45

Equipment \$53,480, TAX (7.75%) \$4,214.45, Freight \$4,800, Service \$2,400

Thank you in advance for your review of the above. Should you have any questions or comments, please do not hesitate to contact Vulcan or The Coombs-Hopkins Company.

Sincerely,

Andrew Synhorst, PE
Sales Manager

Enclosures:

- Vulcan Terms and Conditions
- Vulcan Product Brochure
- Standard Equipment Drawing
- Wiring Diagram and Example Panel Layout

APPENDIX



Vulcan Terms and Conditions

STANDARD TERMS AND CONDITIONS

1. **DEFINITION:** The definition of terms used, interpretation of sale agreement and rights of parties hereto shall be construed under and governed by the Uniform Commercial Code of the State of Iowa. "Seller" when used herein means VULCAN INDUSTRIES. "Buyer" when used herein means the person, company or corporation to whom the quotation is addressed. "Equipment" means those components, articles, supplies or services described herein. These terms and conditions apply unless specifically noted on the quotation.

2. **ACCEPTANCE:** All quotations are for acceptance within the limits established therein and beyond which are subject to change without notice. If this quotation constitutes an acceptance of an offer, such acceptance is expressly made conditional on Buyer's assent solely to the terms of this quotation.

Any terms proposed in buyers acceptance of this quotation which add to, vary from, or conflict with the terms hereof are hereby objected to and rejected and shall not constitute any part of any contract resulting from this quotation. Any such proposed terms shall have no force or effect and the terms herein shall constitute the complete and exclusive statement of the terms and conditions of any contract resulting from this quotation and may be modified only by written instrument executed by the authorized representative of both parties.

3. **PRICES:** Prices for Equipment included in this quotation are subject to the specific outline herein.

4. **PAYMENT: (A. Domestic)** Net 30 days, basic orders; **(B. Domestic)** 90% Net 30 days, 10% Net 30 days after start-up but not to exceed 120 days after initial billing. **(C. Domestic)** 95% Net 30 days, 5% Net 30 days after start-up but not to exceed 120 days after initial billing. **(D. International)** Irrevocable Letter of Credit - Payment due at sight, available at First National Bank, Attn: International Trade Services, 134 South 13th Street, Suite 100, Lincoln, NE 68508 USA, Telex: 484410 FIRSTNATBK OMA, SWIFT: FNBOUS44LIN, Tel: 402-323-5258 Fax: 402-323-5219; ABA #104000016 **(E. International)** Payment will be wired to our account per the following: 30% with purchase order, 30% with approval of submittals, 30% upon delivery to plant and 10% after unit Start-up (to be sent with factory service tech).

If buyer delays shipment, payment shall become due from the scheduled date when equipment is ready for shipment. If Buyer delays completion of manufacture, Seller may require payment according to the percentage of Equipment completion. Equipment held for the Buyer shall be at the Buyer's risk and storage charges may be applied at the discretion of the Seller.

Accounts past due shall accrue interest charges at a rate of 1.5% per month, (18% annual rate), where permitted by applicable law. Buyer shall pay Seller reasonable cost of collection or securing money due and unpaid, including a reasonable attorney's fee of 25% of the amount owed.

5. **TAXES:** Prices do not include present or future sales, use, occupation, excise or other taxes in repeat of manufacture sales, or delivery of Equipment which shall be paid by the Buyer unless this is specifically defined and outlined in the body of the quotation as paid by the Seller. If tax-exempt, Buyer shall supply to the Seller a valid exemption certificate. If not exempt, Buyer shall supply all other tax information required by Seller.

6. **SCHEDULE:** Delivery dates shall be interpreted as estimated and in no event shall dates be construed as falling within the meaning "time is of the essence." The Seller shall not be liable for delays due to force majeure, strikes, labor difficulties, fires, acts of government or military forces, transportation, procurement or any other cause beyond the reasonable control of the Seller. No provision for liquidated damages for any cause shall apply under this order.

7. **TITLE/RISK OF LOSS:** Title and risk of loss shall pass to the Buyer upon tender of delivery F.O.B. manufacturing facility unless otherwise agreed upon by the parties, except that a security interest in the Equipment shall remain with the Seller, regardless of mode of attachment to realty or other property, until full payment has been made therefore. Buyer agrees to do all things and acts necessary to protect said security interest.

8. **ASSIGNMENT:** Neither party shall assign or transfer this contract without prior written consent of the other party. As a condition of any such written consent, such assignment shall be subject to the terms and conditions herein and no greater rights or remedies shall be available to the assignee.

9. **PATENTS:** The Seller shall defend the Buyer and the ultimate owner of the Equipment from alleged or actual infringement of any United States patent by the equipment furnished pursuant hereto if properly notified and given an opportunity to do so with friendly assistance. The Seller shall pay all damages and cost awarded by a competent court in any litigation thus defended or of which it may have had notice and opportunity to defend as aforesaid. Specifically excepted would be parts of special design, construction, or manufacture specified by and originating with the Buyer or the ultimate owner.

10. **WARRANTY:** The Seller warrants all Equipment of its own manufacture to be free of defects caused by faulty material or workmanship and shall, at it's option, exchange or repair without charge, F.O. B. it's factory, such part or parts thereof that prove defective under normal use within eighteen (18) months from date of shipment or twelve (12) months from date of start-up, whichever occurs first. The Seller's obligation under this warranty is limited to the above and does not apply to replacement or repairs, which are required as the result of improper installation, misuse, maladjustment, abnormal operating conditions, or lack of routine maintenance. Nor does this warranty include furnishing of service for maintenance or problems arising from the foregoing causes.

The Seller shall not be liable for any claims, losses, labor expenses or damages, direct or consequential, resulting directly or indirectly from the use of, or inability to use, its products, or the other consequential loss of damage of any nature arising from any cause.

This warranty is the sole warranty of the Seller and any other warranties express, implied in law, implied in fact including any warranties of merchantability and fitness for use, are hereby specifically excluded.

11. **QUALIFICATIONS:** This warranty is void unless the Buyer provides protective storage, installs and maintains the equipment in accordance with the Sellers furnished instructions. No employee of the Seller or it's representatives has the authority to alter, or enlarge the terms of this warranty or obligate the Seller beyond the terms of this written warranty.

12. **LIABILITY LIMITATIONS:** The aggregate total liability of the Seller in connection with the performance of this contract, whether for breach of contract or warranty, negligence or otherwise, shall in no event exceed the purchase price of the unit of Equipment upon which such liability is based.

13. **CANCELLATION:** Any contract resulting from this quotation cannot be cancelled except with written consent of the Seller and upon terms, which will indemnify the Seller from any loss, occasioned thereby.

14. **CHANGES:** If the Buyer requests changes of design, configuration, or quantities, other than as outlined by the quotation, these shall be in writing recognizing any price increase or reduction resulting there from. The Seller reserves the right to change or modify the design, construction or material that are equal to or superior to that originally covered by the quotation, subject to approval by applicable reviewing authorities.

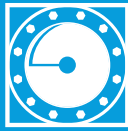
15. **SHORTAGES:** All claims by the Buyer for shortages must be made in writing to the Seller within thirty (30) days after shipment or with ten (10) days after receipt by the Buyer, whichever first occurs.

16. **O.S.H.A.:** The Seller shall endeavor to comply with the Occupational Health and Safety Act of 1970 in the design and manufacture of Equipment under this contract. Compliance for the total installation, use, operation and other matters beyond the control of the Seller cannot be assumed by the Seller as to responsibility for compliance with such laws and regulation, or other State and Local laws and regulation, whether by way of indemnity, warranty or otherwise.

APPENDIX

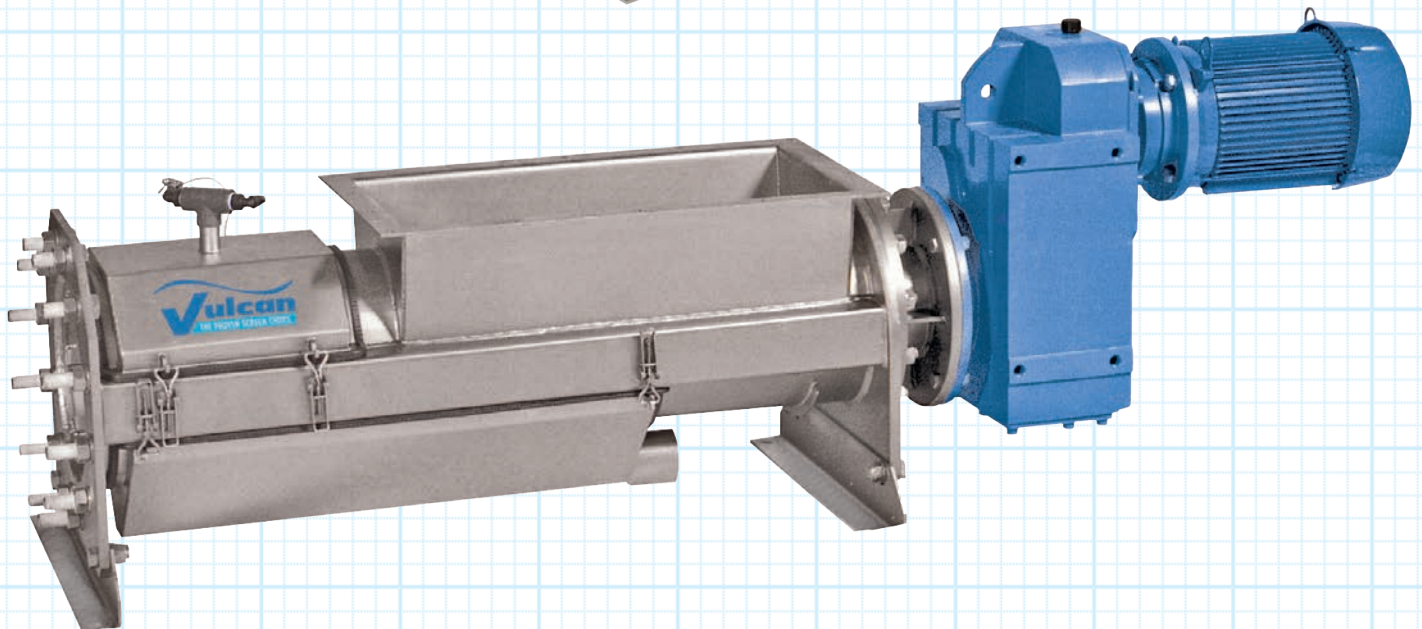
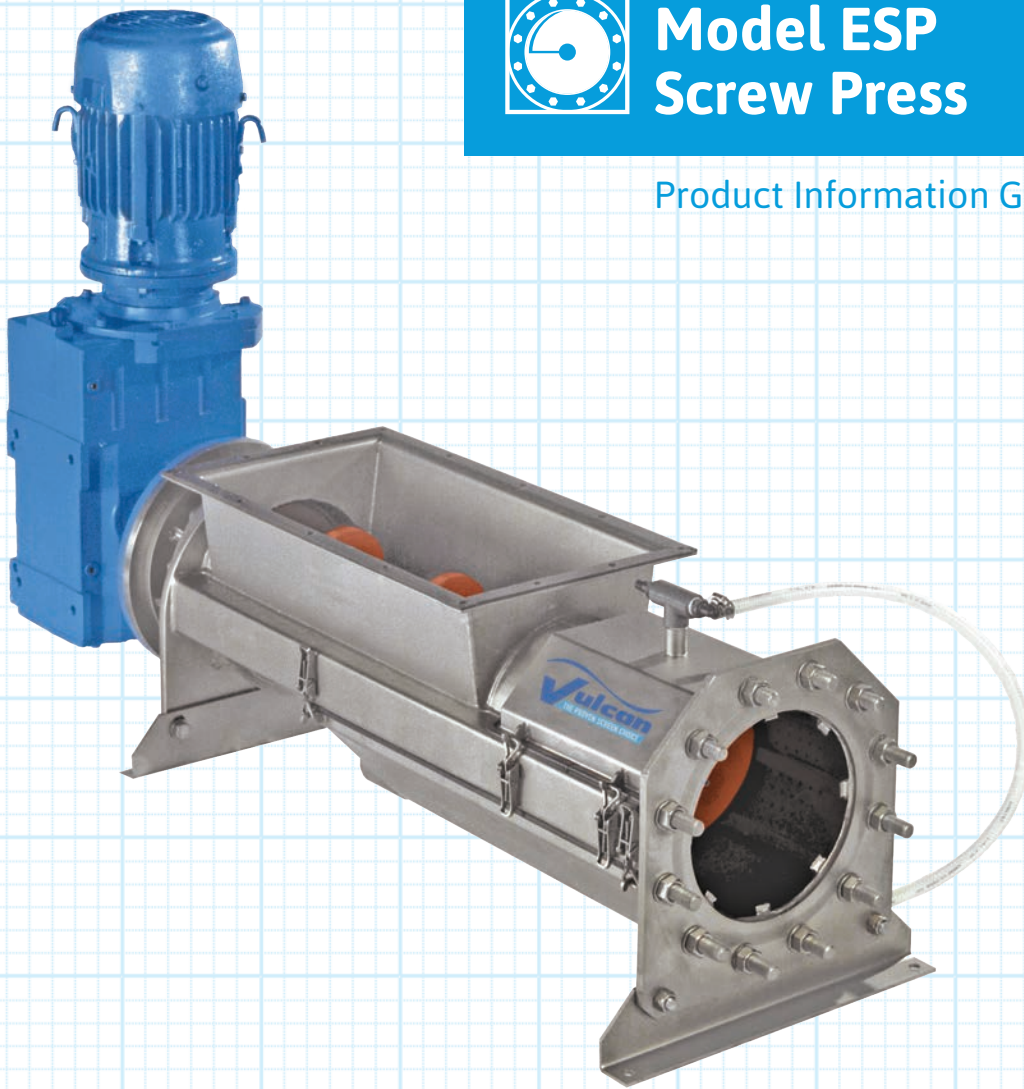


Vulcan Equipment Product Brochure

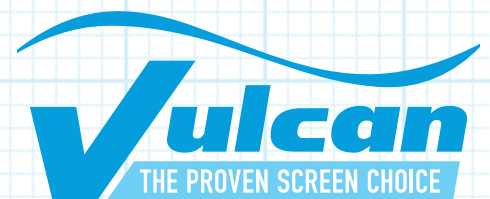


Model ESP Screw Press

Product Information Guide



Find more product information at:
vulcanindustries.com





Model ESP Screw Press

The **Model ESP Screw Press** consists of an axial thrust bearing with a stainless steel body; inlet hopper; wedge-wire drain; substantial, precision machined shafted spiral; press housing with compression zone; flushing nozzle; press water drain pan and drive assembly.

Construction

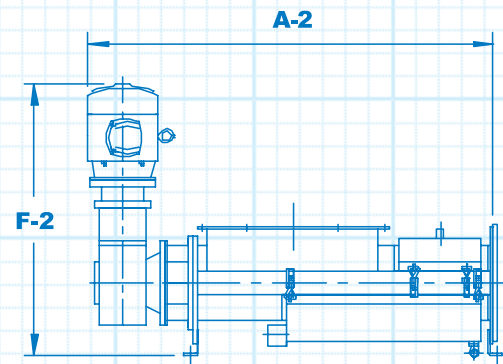
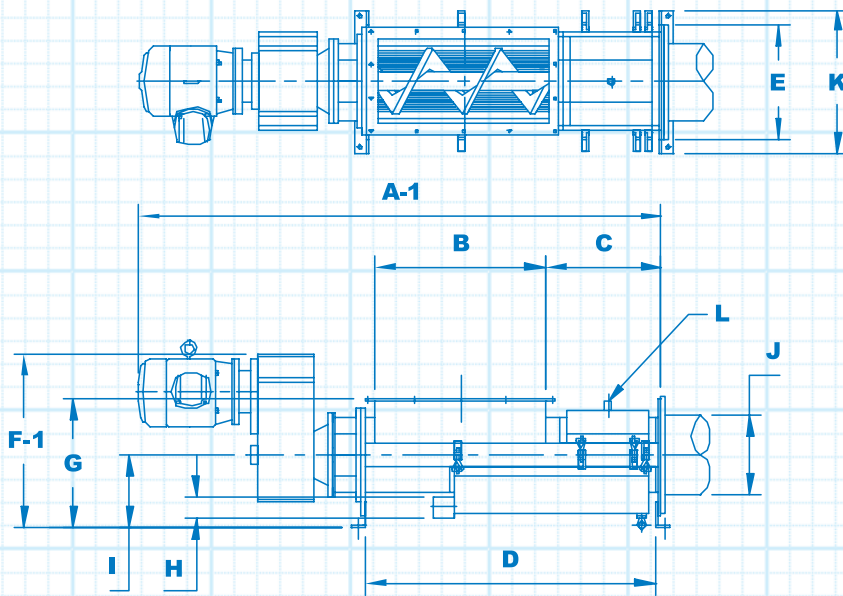
The shafted spiral is cantilevered off the thrust bearing, and does not rest in the housing. This eliminates metal-to-metal contact during operation.

The profiled bars used in the construction of the wedge-wire drain allows for greater flow than perforated drains and helps to prevent blinding. A nylon brush is affixed to the outside edge of the spiral to aid clearing the drain even when greasy material is present.

Operation

Screenings are received in the hopper directly from the mechanical screen or from a conveyor or flushing flume. Excess water drops away from the screenings and flows through the wedge-wire drain as the spiral moves the screenings into the dewatering zone where they are compacted and further dewatered up to 50%. Wash water flushes the dewatering zone and the drain pan and the compacted screenings are transported to a container, conveyor or other suitable receiving device.

The Model ESP Screw Press works in conjunction with the Vulcan Industries Mensch Bar Screen and Stair Screen as well as many other types of mechanical screens.

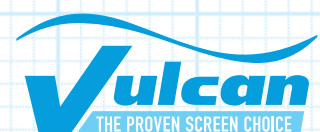


Type	Input Capacity of Raw Screenings
ESP 250	up to 99 ft ³ /h (up to 2.8 M ³ /h)
ESP 400	up to 247 ft ³ /h (up to 7.0 M ³ /h)

Type	A-1	A-2	B	C	D	E	F-1	F-2	G	H	I	J	K	L	Motor
ESP 250/600	74"	56"	24"x12"	16"	40 1/4"	15 3/4"	24"	40"	17 3/4"	3"	10"	10"	20"	1/2"	5 HP
ESP 250/800	82"	64"	32"x12"	16"	48 1/4"	15 3/4"	24"	40"	17 3/4"	3"	10"	10"	20"	1/2"	5 HP
ESP 250/1000	90"	72"	40"x12"	16"	56 1/4"	15 3/4"	24"	40"	17 3/4"	3"	10"	10"	20"	1/2"	5 HP
ESP 250/1200	98"	80"	48"x12"	16"	64 1/4"	15 3/4"	24"	40"	17 3/4"	3"	10"	10"	20"	1/2"	5 HP
ESP 400/600	96"	72"	24"x16"	24"	49 3/4"	33 3/4"	33 3/4"	62"	24 1/2"	4"	14"	16"	26"	3/4"	10 HP
ESP 400/8000	104"	80"	32"x16"	24"	57 3/4"	33 3/4"	33 3/4"	62"	24 1/2"	4"	14"	16"	26"	3/4"	10 HP
ESP 400/1000	112"	87"	40"x16"	24"	65 3/4"	33 3/4"	33 3/4"	62"	24 1/2"	4"	14"	16"	26"	3/4"	10 HP
ESP 400/1200	120"	95"	48"x16"	24"	73 3/4"	33 3/4"	33 3/4"	62"	24 1/2"	4"	14"	16"	26"	3/4"	10 HP

Find more product information at:
vulcanindustries.com

212 S. Kirlin Street
Missouri Valley, Iowa 51555 USA
712-642-2755 Fax 712-642-4256



APPENDIX



Standard Equipment Drawing

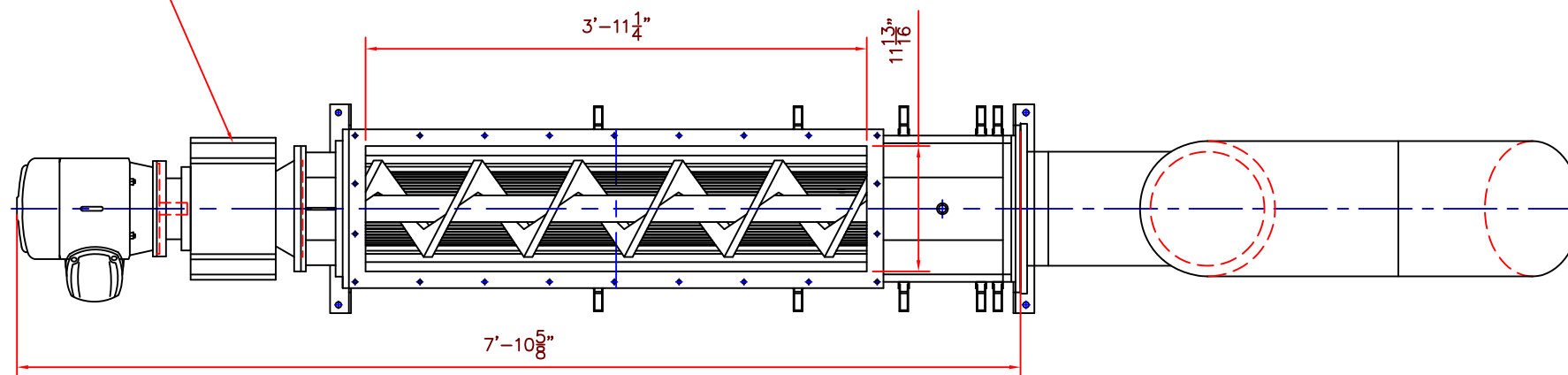


212 SOUTH KIRLIN STREET
MISSOURI VALLEY, IA. 51555
712-642-2755
www.vulcanindustries.com

SCALE: 3/4"=1'-0"	PRODUCT: ESP 250/1200 SCREW PRESS	DRAWN BY: ARS
DATE: 6/30/2020		REVISED BY:
CUST:		REVISED:
ENG:		FACT NO:
PROJECT: PLANT #1 – TERTIARY FILTER SCREENS CORONA, CA.		DRAWING NO: VI-ESP-L1

PRELIMINARY

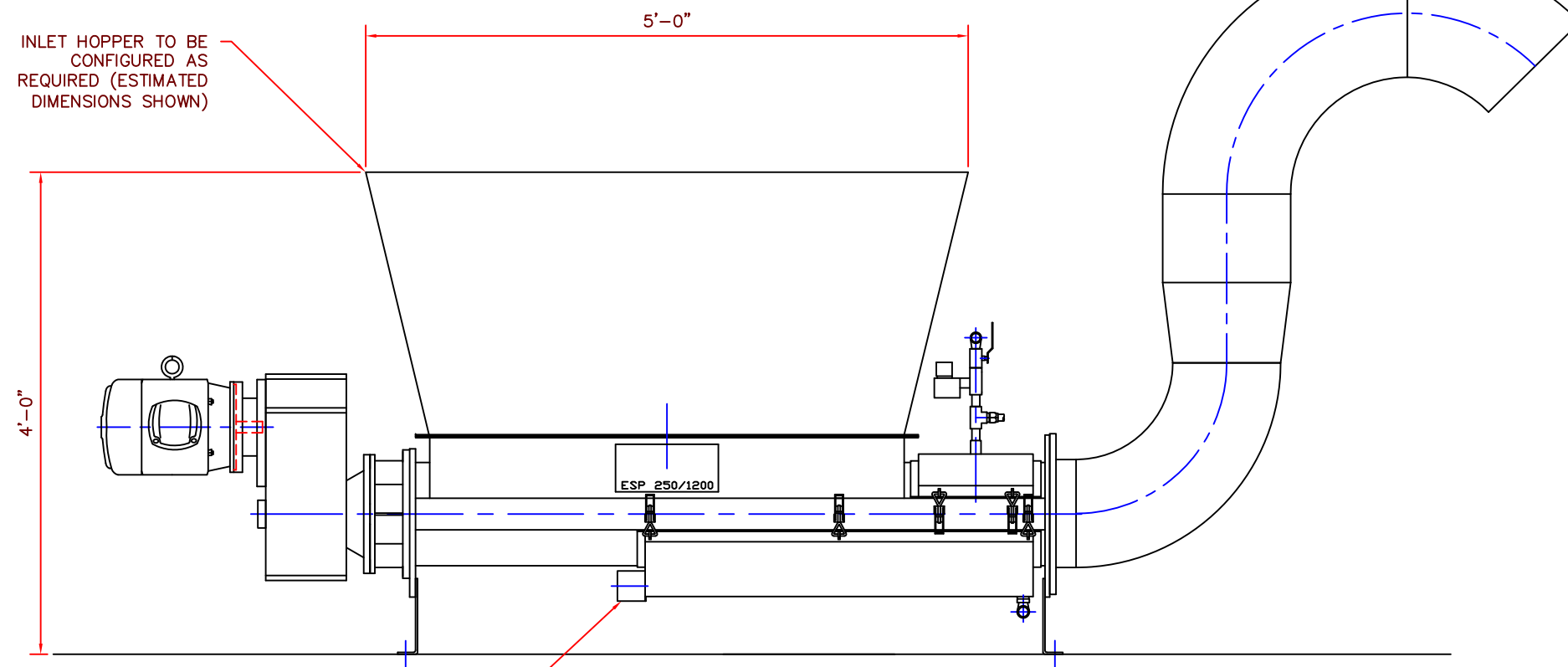
ESP 250/1200 SCREW PRESS



PLAN VIEW

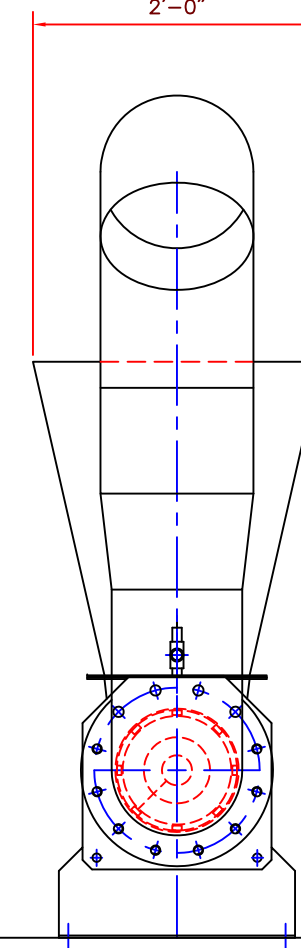
DISCHARGE PIPE
CONFIGURED AS
REQUIRED

INLET HOPPER TO BE
CONFIGURED AS
REQUIRED (ESTIMATED
DIMENSIONS SHOWN)



ELEVATION VIEW

2'-0"



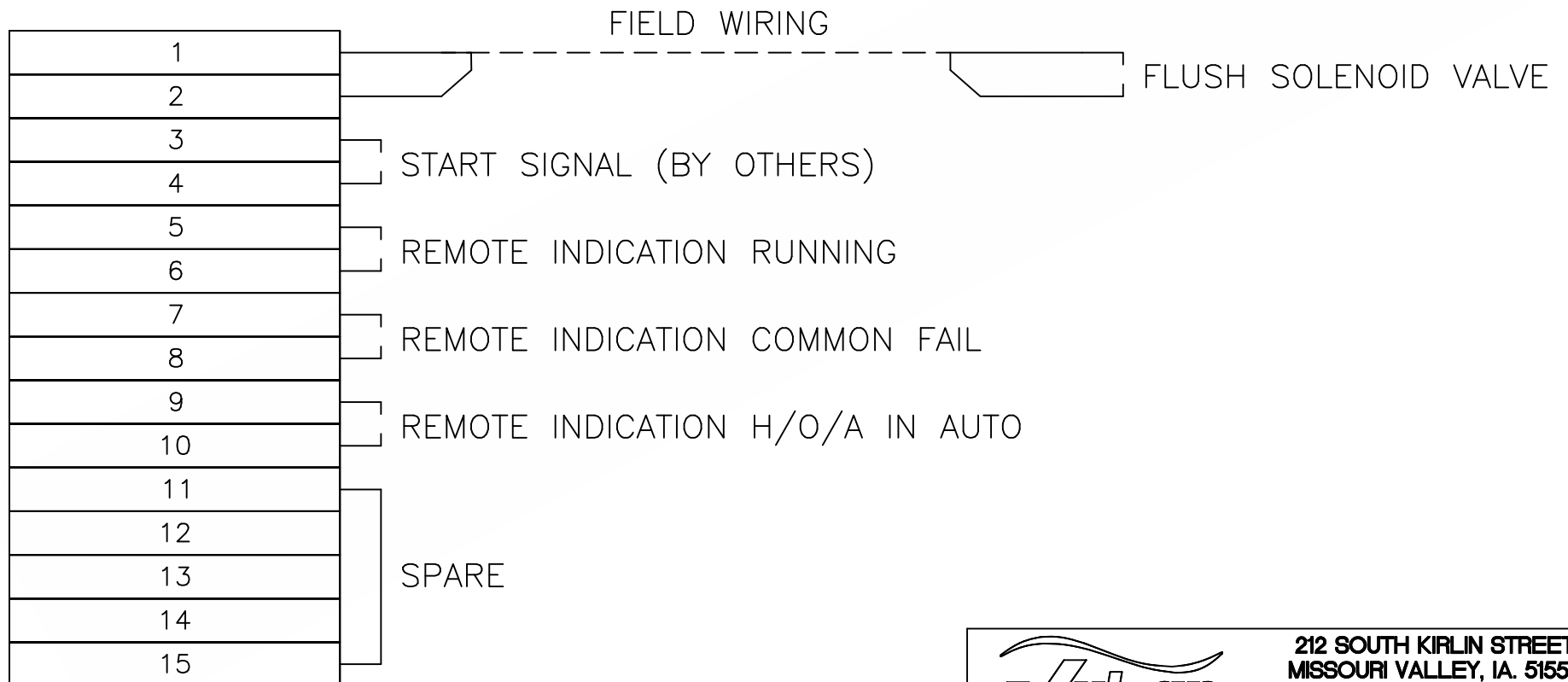
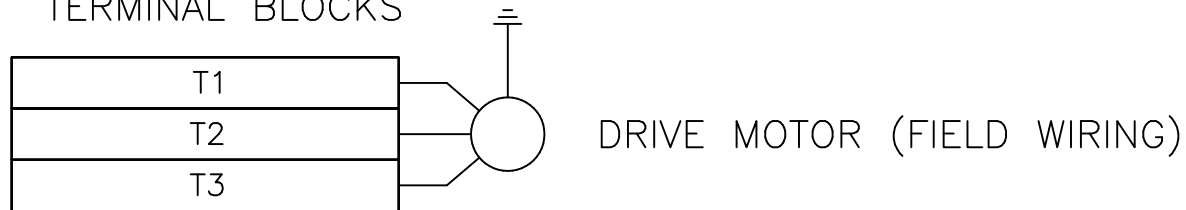
DISCHARGE END VIEW

APPENDIX



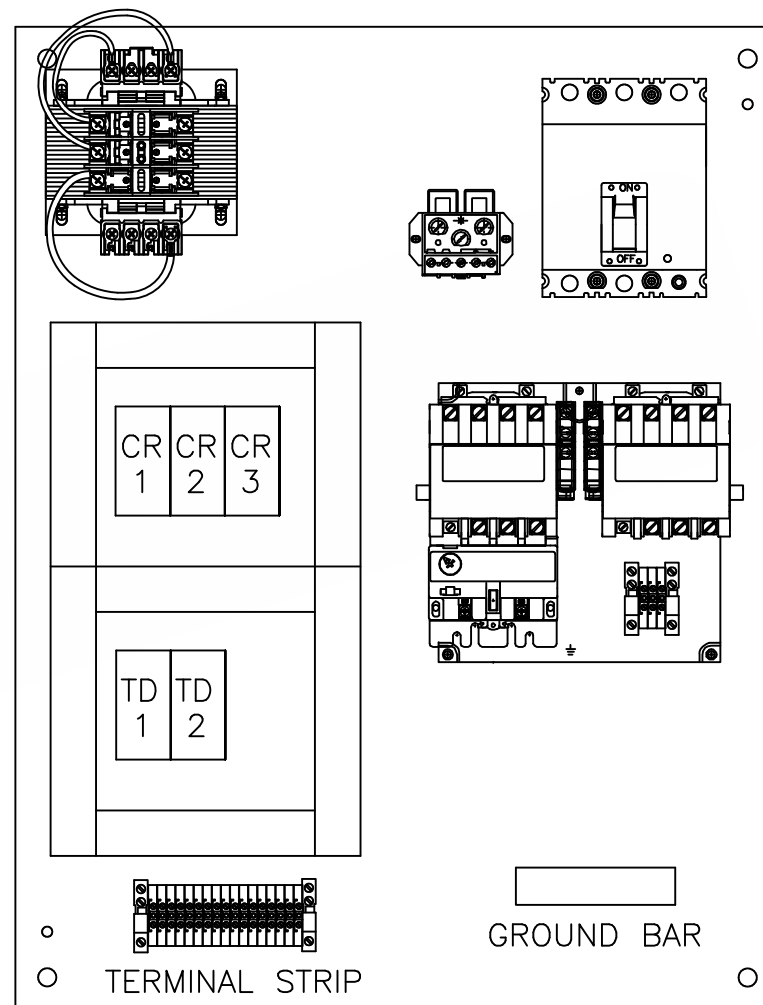
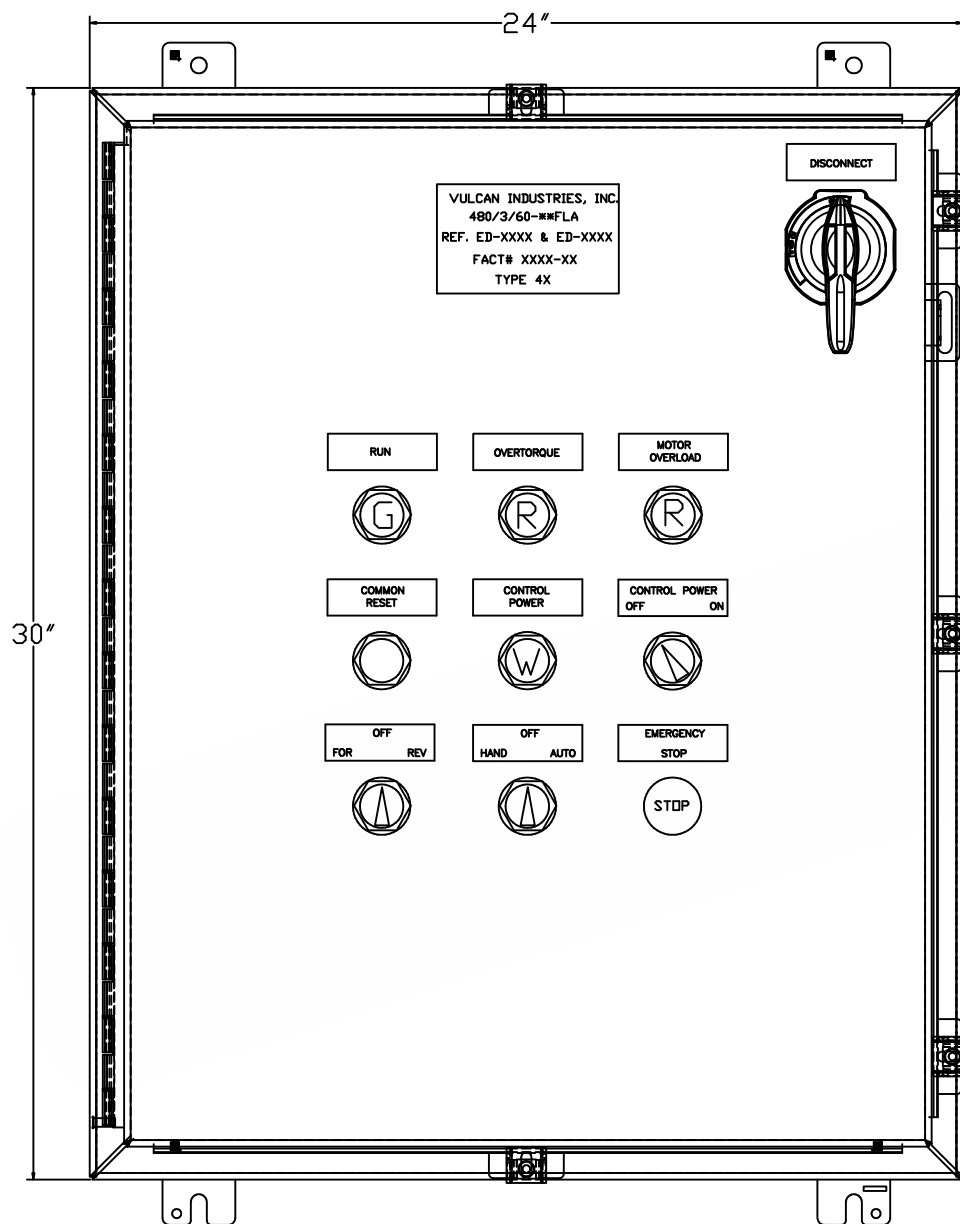
Wiring Diagram and Example Panel Layout

MAIN CONTROL PANEL
TERMINAL BLOCKS




212 SOUTH KIRLIN STREET
MISSOURI VALLEY, IA. 51555
712-642-2755
www.vulcanindustries.com

SCALE:	NONE	DRAWN BY:	SES
DATE:	6/30/2020	SHEET NUMBER:	2 OF 3
TITLE:	ESP TERMINAL BLOCKS		PROJECT NUMBER: REF ONLY
PROJECT:	T-FILTER PRESS - CORONA, CA. #1		DRAWING NUMBER: ED-REFONLY



ENCLOSURE NEMA 4X
HOFFMAN # A-30H2408SSLP

NO CONDUIT ENTRANCES
PROVIDED IN THE ENCLOSURE

		212 SOUTH KIRLIN STREET MISSOURI VALLEY, IA. 51555 712-642-2755 www.vulcanindustries.com	
SCALE:	NONE	DRAWN BY:	SES
DATE:	6/30/2020	SHEET NUMBER:	3 OF 3
TITLE:	CONTROL PANEL LAYOUT		PROJECT NUMBER:
		REF ONLY	
PROJECT:	T-FILTER PRESS - CORONA, CA. #1		DRAWING NUMBER:
		ED-REFONLY	