

INVITATION TO BID

Bid Invitation Number: 55-2014

Date of Issue: 3/11/14

Sealed bids will be received in the office of the Division of Central Purchasing, 200 East Main Street, Lexington, Kentucky, until **2:00 PM**, prevailing local time on **3/25/2014**. Bids must be received by the above-mentioned date and time. Mailed bids should be sent to:

Division of Central Purchasing
200 East Main Street, Room 338
Lexington, KY 40507, (859) 258-3320

The Lexington-Fayette Urban County Government assumes no responsibility for bids that are not addressed and delivered as indicated above. Bids that are not delivered to the Division of Central Purchasing by the stated time and date will be rejected.

All bids must have the company name and address, bid invitation number, and the commodity/service on the outside of the envelope.

Bids are to include all shipping costs to the point of delivery located at: See Specifications

Bid Security Required: XX Yes No Performance Bond Required: Yes X No
Cashier Check, Certified Check, Bid Bond (Personal checks and company checks will not be acceptable).

Commodity/Service
In-Line Shredder/Grinder for TB WWTP Primary Digester & Gravity Thickener Buildings
See specifications

<p style="text-align: center;"><u>Check One:</u></p> <p><u> </u> Bid Specifications Met</p> <p><u> X</u> Exceptions to Bid Specifications. <i>Exceptions shall be itemized and attached to bid proposal submitted.</i></p>	<p style="text-align: center;"><u>Proposed Delivery:</u></p> <p><u> 70</u> days after acceptance of bid.</p>
<p style="text-align: center;"><u>Procurement Card Usage</u></p> <p><u> </u> Yes The Lexington-Fayette Urban County Government will be using Procurement Cards to purchase goods and services and also to make payments. Will you accept Procurement Cards?</p> <p><u> X</u> No</p>	

Submitted by: JWC Environmental, LLC
Firm
290 Paularino Ave.
Address
Costa Mesa, CA 92626
City, State & Zip

***Bid must be signed:
(original signature)***



Signature of Authorized Company Representative – Title
RONALD A. DWECKER

Representative's Name (Typed or printed)
(949) 833-3888 (949) 833-8858

Area Code - Phone - Extension Fax #
jwce@jwce.com

E-Mail Address

The Affidavit in this bid must be completed before your firm can be considered for award of this contract.

AFFIDAVIT

Comes the Affiant, RONALD A. DWEECKER, and after being first duly sworn under penalty of perjury as follows:

1. His/her name is RONALD A. DWEECKER and he/she is the individual submitting the bid or is the authorized representative of JWC Environmental, LLC

the entity submitting the bid (hereinafter referred to as "Bidder").

2. Bidder will pay all taxes and fees, which are owed to the Lexington-Fayette Urban County Government at the time the bid is submitted, prior to award of the contract and will maintain a "current" status in regard to those taxes and fees during the life of the contract.

3. Bidder will obtain a Lexington-Fayette Urban County Government business license, if applicable, prior to award of the contract.

4. Bidder has authorized the Division of Central Purchasing to verify the above-mentioned information with the Division of Revenue and to disclose to the Urban County Council that taxes and/or fees are delinquent or that a business license has not been obtained.

5. Bidder has not knowingly violated any provision of the campaign finance laws of the Commonwealth of Kentucky within the past five (5) years and the award of a contract to the Bidder will not violate any provision of the campaign finance laws of the Commonwealth.

6. Bidder has not knowingly violated any provision of Chapter 25 of the Lexington-Fayette Urban County Government Code of Ordinances, known as "Ethics Act."

7. Bidder acknowledges that "knowingly" for purposes of this Affidavit means, with respect to conduct or to circumstances described by a statute or ordinance defining an offense, that a person is aware or should have been aware that his conduct is of that nature or that the circumstance exists.

Further, Affiant sayeth naught.

STATE OF _____

COUNTY OF _____

The foregoing instrument was subscribed, sworn to and acknowledged before me

by _____ on this the _____ day

of _____, 2014.

My Commission expires: _____

SEE ATTACHED

NOTARY PUBLIC, STATE AT LARGE

Please refer to Section II. Bid Conditions, Item "U" prior to completing this form.

CALIFORNIA JURAT WITH AFFIANT STATEMENT

- See Attached Document (Notary to cross out lines 1-6 below)
- See Statement Below (Lines 1-5 to be completed only by document signer[s], *not* Notary)

Signature of Document Signer No. 1

Signature of Document Signer No. 2 (if any)

State of California

County of ORANGE

Subscribed and sworn to (or affirmed) before me on this

24 day of MARCH, 2014, by

(1) RONALD A. DECKER
Name of Signer

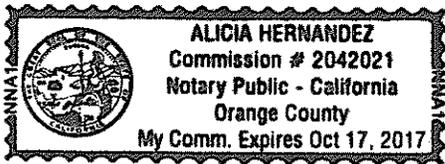
proved to me on the basis of satisfactory evidence to be the person who appeared before me (.) X

(and

(2) N/A
Name of Signer

proved to me on the basis of satisfactory evidence to be the person who appeared before me.)

Signature Alicia Hernandez
Signature of Notary Public



Place Notary Seal Above

OPTIONAL

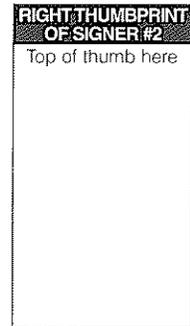
Though the information below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent removal and reattachment of this form to another document.

Further Description of Any Attached Document

Title or Type of Document: INVITATION TO BID AFFIDAVIT

Document Date: MARCH 24, 2014 Number of Pages: 2

Signer(s) Other Than Named Above: N/A



I. GREEN PROCUREMENT

A. ENERGY

The Lexington-Fayette Urban County Government is committed to protecting our environment and being fiscally responsible to our citizens.

The Lexington-Fayette Urban County Government mandates the use of Energy Star compliant products if they are available in the marketplace (go to www.Energystar.gov). If these products are available, but not submitted in your pricing, your bid will be rejected as non-compliant.

ENERGY STAR is a government program that offers businesses and consumers energy-efficient solutions, making it easy to save money while protecting the environment for future generations.

Key Benefits

These products use 25 to 50% less energy
Reduced energy costs without compromising quality or performance
Reduced air pollution because fewer fossil fuels are burned
Significant return on investment
Extended product life and decreased maintenance

B. GREEN SEAL CERTIFIED PRODUCTS

The Lexington-Fayette Urban County Government is also committed to using other environmentally friendly products that do not negatively impact our environment. Green Seal is a non-profit organization devoted to environmental standard setting, product certification, and public education.

Go to www.GreenSeal.org to find available certified products. These products will have a reduced impact on the environment and on human health. The products to be used must be pre-approved by the LFUCG prior to commencement of any work in any LFUCG facility. If a Green Seal product is not available, the LFUCG must provide a signed waiver to use an alternate product. Please provide information on the Green Seal products being used with your bid response.

C. GREEN COMMUNITY

The Lexington-Fayette Urban County Government (LFUCG) serves as a principal, along with the University of Kentucky and Fayette County Public Schools, in the Bluegrass Partnership for a Green Community. The Purchasing Team component of the Partnership collaborates on economy of scale purchasing that promotes and enhances environmental initiatives. Specifically, when applicable, each principal is interested in obtaining best value products and/or services which promote environment initiatives via solicitations and awards from the other principals.

If your company is the successful bidder on this Invitation For Bid, do you agree to extend the same product/service pricing to the other principals of the Bluegrass Partnership for a Green Community (i.e. University of Kentucky and Fayette County Schools) if requested?

Yes _____ No x

II. Bid Conditions

- A. No bid may be withdrawn for a period of sixty (60) days after the date and time set for opening.
- B. No bid may be altered after the date and time set for opening. In the case of obvious errors, the Division of Central Purchasing may permit the withdrawal of a bid. The decision as to whether a bid may be withdrawn shall be that of the Division of Central Purchasing.
- C. Acceptance of this proposal shall be enactment of an Ordinance by the Urban County Council.
- D. The bidder agrees that the Urban County Government reserves the right to reject any and all bids for either fiscal or technical reasons, and to award each part of the bid separately or all parts to one vendor.
- E. Minor exceptions may not eliminate the bidder. The decision as to whether any exception is minor shall be entirely that of the head of the requisitioning Department or Division and the Director of the Division of Central Purchasing. The Urban County Government may waive technicalities and informalities where such waiver would best serve the interests of the Urban County Government.
- F. Manufacturer's catalogue numbers, trade names, etc., where shown herein are for descriptive purposes and are to guide the bidder in interpreting the standard of quality, design, and performance desired, and shall not be construed to exclude proposals based on furnishing other types of materials and/or services. However, any substitution or departure proposed by the bidder must be clearly noted and described; otherwise, it will be assumed that the bidder intends to supply items specifically mentioned in this Invitation for Bids.
- G. The Urban County Government may require demonstrations of the materials proposed herein prior to acceptance of this proposal.
- H. Bids must be submitted on this form and must be signed by the bidder or his authorized representative. Unsigned bids will not be considered.
- I. Bids must be submitted prior to the date and time indicated for opening. Bids submitted after this time will not be considered.
- J. All bids mailed must be marked on the face of the envelope:

"Bid on #55-2014 In-Line Shredder/Grinder for TB WWTP Primary Digester & Gravity Thickener Buildings"

and addressed to: Division of Central Purchasing
 200 East Main Street, Room 338
 Lexington, Kentucky 40507

The Lexington-Fayette Urban County Government assumes no responsibility for bids that are not addressed and delivered as indicated above. Bids that are not delivered to the Division of Central Purchasing by the stated time and date will be rejected.

- K. Bidder is requested to show both unit prices and lot prices. In the event of error, the unit price shall prevail.
- L. A Certified / Cashier's Check or Bid Bond in the amount of 5% percent of the bid price must be attached hereto. This check must be made payable to the Lexington-Fayette Urban County Government, and will be returned when the material and/or services specified herein have been delivered in accordance with specifications. In the event of failure to perform within the time period set forth in this bid, it is agreed the certified / cashier's check may be cashed and the funds retained by

the Lexington-Fayette Urban County Government as liquidated damages. Checks of unsuccessful bidders will be returned when the bid has been awarded.

- M. The delivery dates specified by bidder may be a factor in the determination of the successful bidder.
- N. Tabulations of bids received may be mailed to bidders. Bidders requesting tabulations must enclose a stamped, self-addressed envelope with the bid.
- O. The Lexington-Fayette Urban County Government is exempt from Kentucky Sales Tax and Federal Excise Tax on materials purchased from this bid invitation. Materials purchased by the bidder for construction projects are not tax exempt and are the sole responsibility of the bidder.
- P. All material furnished hereunder must be in full compliance with OSHA regulations.
- Q. If more than one bid is offered by one party, or by any person or persons representing a party, all such bids shall be rejected.
- R. Signature on the face of this bid by the Bidder or his authorized representative shall be construed as acceptance of and compliance with all terms and conditions contained herein.
- S. The Entity (regardless of whether construction contractor, non-construction contractor or supplier) agrees to provide equal opportunity in employment for all qualified persons, to prohibit discrimination in employment because of race, color, creed, national origin, sex or age, and to promote equal employment through a positive, continuing program from itself and each of its sub-contracting agents. This program of equal employment opportunity shall apply to every aspect of its employment policies and practices.
- T. The Kentucky Equal Employment Opportunity Act of 1978 (KRS 45.560-45.640) requires that any county, city, town, school district, water district, hospital district, or other political subdivision of the state shall include in directly or indirectly publicly funded contracts for supplies, materials, services, or equipment hereinafter entered into the following provisions:

During the performance of this contract, the contractor agrees as follows:

- (1) The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, age or national origin;*
- (2) The contractor will state in all solicitations or advertisements for employees placed by or on behalf of the contractors that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, age or national origin;*
- (3) The contractor will post notices in conspicuous places, available to employees and applicants for employment, setting forth the provisions of the non-discrimination clauses required by this section; and*
- (4) The contractor will send a notice to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding advising the labor union or workers' representative of the contractor's commitments under the nondiscrimination clauses.*

The Act further provides:

KRS 45.610. Hiring minorities - Information required

- (1) For the length of the contract, each contractor shall hire minorities from other sources within the drawing area, should the union with which he has collective bargaining agreements be unwilling to supply sufficient minorities to satisfy the agreed upon goals and timetable.*

(2) Each contractor shall, for the length of the contract, furnish such information as required by KRS 45.560 to KRS 45.640 and by such rules, regulations and orders issued pursuant thereto and will permit access to all books and records pertaining to his employment practices and work sites by the contracting agency and the department for purposes of investigation to ascertain compliance with KRS 45.560 to 45.640 and such rules, regulations and orders issued pursuant thereto.

KRS 45.620. Action against contractor - Hiring of minority contractor or subcontractor

- (1) If any contractor is found by the department to have engaged in an unlawful practice under this chapter during the course of performing under a contract or subcontract covered under KRS 45.560 to 45.640, the department shall so certify to the contracting agency and such certification shall be binding upon the contracting agency unless it is reversed in the course of judicial review.
- (2) If the contractor is found to have committed an unlawful practice under KRS 45.560 to 45.640, the contracting agency may cancel or terminate the contract, conditioned upon a program for future compliance approved by the contracting agency and the department. The contracting agency may declare such a contractor ineligible to bid on further contracts with that agency until such time as the contractor complies in full with the requirements of KRS 45.560 to 45.640.
- (3) The equal employment provisions of KRS 45.560 to 45.640 may be met in part by a contractor by subcontracting to a minority contractor or subcontractor. For the provisions of KRS 45.560 to 45.640, a minority contractor or subcontractor shall mean a business that is owned and controlled by one or more persons disadvantaged by racial or ethnic circumstances.

KRS 45.630 Termination of existing employee not required, when

Any provision of KRS 45.560 to 45.640 notwithstanding, no contractor shall be required to terminate an existing employee upon proof that that employee was employed prior to the date of the contract.

KRS 45.640 Minimum skills

Nothing in KRS 45.560 to 45.640 shall require a contractor to hire anyone who fails to demonstrate the minimum skills required to perform a particular job.

It is recommended that all of the provisions above quoted to be included as special conditions in each contract. In the case of a contract exceeding \$250,000, the contractor is required to furnish evidence that his work-force in Kentucky is representative of the available work-force in the area from which he draws employees, or to supply an Affirmative Action plan which will achieve such representation during the life of the contract.

- U. Any party, firm or individual submitting a proposal pursuant to this invitation must be in compliance with the requirements of the Lexington-Fayette Urban County Government regarding taxes and fees before they can be considered for award of this invitation and must maintain a "current" status with regard to those taxes and fees throughout the term of the contract. The contractor must be in compliance with Chapter 13 from the Code of Ordinances of the Lexington-Fayette Urban County Government. The contractor must be in compliance with Ordinance 35-2000 pursuant to contractor registration with the Division of Building Inspection. If applicable, said business must have a Fayette County business license.

Pursuant to KRS 45A.343 and KRS 45A.345, the contractor shall

- (1) Reveal any final determination of a violation by the contractor within the previous five year period pursuant to KRS Chapters 136 (corporation and utility taxes), 139 (sales and use taxes), 141 (income taxes), 337 (wages and hours), 338 (occupational safety and health of employees), 341 (unemployment and compensation) and 342 (labor and human rights) that apply to the contractor; and*
- (2) Be in continuous compliance with the above-mentioned KRS provisions that apply to the contractor for the duration of the contract.*

A contractor's failure to reveal the above or to comply with such provisions for the duration of the contract shall be grounds for cancellation of the contract and disqualification of the contractor from eligibility for future contracts for a period of two (2) years.

- V. Vendors who respond to this invitation have the right to file a notice of contention associated with the bid process or to file a notice of appeal of the recommendation made by the Director of Central Purchasing resulting from this invitation.

Notice of contention with the bid process must be filed within 3 business days of the bid/proposal opening by (1) sending a written notice, including sufficient documentation to support contention, to the Director of the Division of Central Purchasing or (2) submitting a written request for a meeting with the Director of Central Purchasing to explain his/her contention with the bid process. After consulting with the Commissioner of Finance the Chief Administrative Officer and reviewing the documentation and/or hearing the vendor, the Director of Central Purchasing shall promptly respond in writing findings as to the compliance with bid processes. If, based on this review, a bid process irregularity is deemed to have occurred the Director of Central Purchasing will consult with the Commissioner of Finance, the Chief Administrative Officer and the Department of Law as to the appropriate remedy.

Notice of appeal of a bid recommendation must be filed within 3 business days of the bid recommendation by (1) sending a written notice, including sufficient documentation to support appeal, to the Director, Division of Central Purchasing or (2) submitting a written request for a meeting with the Director of Central Purchasing to explain his appeal. After reviewing the documentation and/or hearing the vendor and consulting with the Commissioner of Finance and the Chief Administrative Officer, the Director of Central Purchasing shall in writing, affirm or withdraw the recommendation.

LFUCG Non-Appropriation Clause

Contractor acknowledges that the LFUCG is a governmental entity, and the contract validity is based upon the availability of public funding under the authority of its statutory mandate.

In the event that public funds are unavailable and not appropriated for the performance of the LFUCG's obligations under this contract, then this contract shall automatically expire without penalty to the LFUCG thirty (30) days after written notice to Contractor of the unavailability and non-appropriation of public funds. It is expressly agreed that the LFUCG shall not activate this non-appropriation provision for its convenience or to circumvent the requirements of this contract, but only as an emergency fiscal measure during a substantial fiscal crisis, which affects generally its governmental operations.

In the event of a change in the LFUCG's statutory authority, mandate and mandated functions, by state and federal legislative or regulatory action, which adversely affects the LFUCG's authority to continue its obligations under this contract, then this contract shall automatically terminate without penalty to the LFUCG upon written notice to Contractor of such limitation or change in the LFUCG's legal authority.

EQUAL OPPORTUNITY AGREEMENT

The Law

Title VII of the Civil Rights Act of 1964 (amended 1972) states that it is unlawful for an employer to discriminate in employment because of race, color, religion, sex, age (40-70 years) or national origin.

Executive Order No. 11246 on Nondiscrimination under Federal contract prohibits employment discrimination by contractor and sub-contractor doing business with the Federal Government or recipients of Federal funds. This order was later amended by Executive Order No. 11375 to prohibit discrimination on the basis of sex.

Section 503 of the Rehabilitation Act of 1973 states:

The Contractor will not discriminate against any employee or applicant for employment because of physical or mental handicap.

Section 2012 of the Vietnam Era Veterans Readjustment Act of 1973 requires Affirmative Action on behalf of disabled veterans and veterans of the Vietnam Era by contractors having Federal contracts.

Section 206(A) of Executive Order 12086, Consolidation of Contract Compliance Functions for Equal Employment Opportunity, states:

The Secretary of Labor may investigate the employment practices of any Government contractor or sub-contractor to determine whether or not the contractual provisions specified in Section 202 of this order have been violated.

The Lexington-Fayette Urban County Government practices Equal Opportunity in recruiting, hiring and promoting. It is the Government's intent to affirmatively provide employment opportunities for those individuals who have previously not been allowed to enter into the mainstream of society. Because of its importance to the local Government, this policy carries the full endorsement of the Mayor, Commissioners, Directors and all supervisory personnel. In following this commitment to Equal Employment Opportunity and because the Government is the benefactor of the Federal funds, it is both against the Urban County Government policy and illegal for the Government to let contracts to companies which knowingly or unknowingly practice discrimination in their employment practices. Violation of the above mentioned ordinances may cause a contract to be canceled and the contractors may be declared ineligible for future consideration.

Please sign this statement in the appropriate space acknowledging that you have read and understand the provisions contained herein. Return this document as part of your application packet.

Bidders

I/We agree to comply with the Civil Rights Laws listed above that govern employment rights of minorities, women, Vietnam veterans, handicapped and aged persons.

Signature

JWC Environmental, LLC

Name of Business

GENERAL PROVISIONS OF BID CONTRACT

By signing the below, bidder acknowledges that it understands and agrees with the following provisions related to its bid response and the provision of any goods or services to LFUCG upon selection by LFUCG pursuant to the bid request:

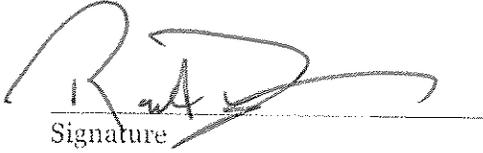
1. Bidder shall comply with all Federal, State & Local regulations concerning this type of service or good.
2. Failure to submit ALL forms and information required by LFUCG may be grounds for disqualification.
3. Addenda: All addenda, if any, must be considered by the bidder in making its response, and such addenda shall be made a part of the requirements of the bid contract. Before submitting a bid response, it is incumbent upon bidder to be informed as to whether any addenda have been issued, and the failure of the bidder to cover any such addenda may result in disqualification of that response.
4. Bid Reservations: LFUCG reserves the right to reject any or all bid responses, to award in whole or part, and to waive minor immaterial defects in proposals. LFUCG may consider any alternative proposal that meets its basic needs.
5. Liability: LFUCG is not responsible for any cost incurred by bidder in the preparation of its response.
6. Changes/Alterations: Bidder may change or withdraw a proposal at any time prior to the opening; however, no oral modifications will be allowed. Only letters, or other formal written requests for modifications or corrections of a previously submitted proposal which is addressed in the same manner as the bid response, and received by LFUCG prior to the scheduled closing time for receipt of bids, will be accepted. The bid response when opened, will then be corrected in accordance with such written request(s), provided that the written request is contained in a sealed envelope which is plainly marked "modifications of bid response".
7. Clarification of Submittal: LFUCG reserves the right to obtain clarification of any point in a bid or to obtain additional information from any bidder.
8. Bribery Clause: By his/her signature on its response, bidder certifies that no employee of his/hers, any affiliate or subcontractor, has bribed or attempted to bribe an officer or employee of the LFUCG.
9. Additional Information: While not necessary, the bidder may include any product brochures, software documentation, sample reports, or other documentation that may assist LFUCG in better understanding and evaluating the bid response. Additional documentation shall not serve as a substitute for other documentation which is required by the LFUCG to be submitted with the bid response.
10. Ambiguity, Conflict or other Errors: If a bidder discovers any ambiguity, conflict, discrepancy, omission or other error in the bid request of LFUCG, it shall immediately notify LFUCG of such error in writing and request modification or clarification of the document if allowable by the LFUCG.
11. Agreement to Bid Terms: In submitting its bid response, the bidder agrees that it has carefully examined the specifications and all provisions relating to LFUCG's bid request, including but not limited to the bid contract. By submission of its bid response, bidder states that it

understands the meaning, intent and requirements of LFUCG's bid request and agrees to the same. The successful bidder shall warrant that it is familiar with and understands all provisions herein and shall warrant that it can comply with them. No additional compensation to bidder shall be authorized for services, expenses, or goods reasonably covered under these provisions that the bidder omits from its bid response.

12. Cancellation: LFUCG may unilaterally terminate the bid contract with the selected bidder(s) at any time, with or without cause, by providing at least thirty (30) days advance written notice unless a different advance written notice period is negotiated prior to contract approval. Payment for services or goods received prior to termination shall be made by the LFUCG provided these goods or services were provided in a manner acceptable to the LFUCG. Payment for those goods and services shall not be unreasonably withheld.
13. Assignment of Contract: The selected bidder(s) shall not assign or subcontract any portion of the bid contract with LFUCG without the express written consent of LFUCG. Any purported assignment or subcontract in violation hereof shall be void. It is expressly acknowledged that LFUCG shall never be required or obligated to consent to any request for assignment or subcontract; and further that such refusal to consent can be for any or no reason, fully within the sole discretion of LFUCG.
14. No Waiver: No failure or delay by LFUCG in exercising any right, remedy, power or privilege hereunder, nor any single or partial exercise thereof, nor the exercise of any other right, remedy, power or privilege shall operate as a waiver hereof or thereof. No failure or delay by LFUCG in exercising any right, remedy, power or privilege under or in respect of this bid proposal or bid contract shall affect the rights, remedies, powers or privileges of LFUCG hereunder or shall operate as a waiver thereof.
15. Authority to do Business: Each bidder must be authorized to do business under the laws of the Commonwealth of Kentucky and must be in good standing and have full legal capacity to provide the goods or services specified in the bid proposal. Each bidder must have all necessary right and lawful authority to submit the bid response and enter into the bid contract for the full term hereof including any necessary corporate or other action authorizing the bidder to submit the bid response and enter into this bid contract. If requested, the bidder will provide LFUCG with a copy of a corporate resolution authorizing this action and/or a letter from an attorney confirming that the proposer is authorized to do business in the Commonwealth of Kentucky. All bid responses must be signed by a duly authorized officer, agent or employee of the bidder.
16. Governing Law: This bid request and bid contract shall be governed by and construed in accordance with the laws of the Commonwealth of Kentucky. In the event of any proceedings regarding this matter, the bidder agrees that the venue shall be the Fayette County Circuit Court or the U.S. District Court for the Eastern District of Kentucky, Lexington Division and that the bidder expressly consents to personal jurisdiction and venue in such Court for the limited and sole purpose of proceedings relating to these matters or any rights or obligations arising thereunder.
17. Ability to Meet Obligations: Bidder affirmatively states that there are no actions, suits or proceedings of any kind pending against bidder or, to the knowledge of the bidder, threatened against the bidder before or by any court, governmental body or agency or other tribunal or authority which would, if adversely determined, have a materially adverse effect on the authority or ability of bidder to perform its obligations under this bid response or bid contract, or which question the legality, validity or enforceability hereof or thereof.
18. Bidder understands and agrees that its employees, agents, or subcontractors are not

employees of LFUCG for any purpose whatsoever. Bidder is an independent contractor at all times related to the bid response or bid contract.

19. If any term or provision of this bid contract shall be found to be illegal or unenforceable, the remainder of the contract shall remain in full force and such term or provision shall be deemed stricken.


Signature

24 MAR 2014
Date

**RISK MANAGEMENT PROVISIONS
INSURANCE AND INDEMNIFICATION**

Bid # 55-2014 – In-Line Shredder/Grinder for TB WWTP Primary Digester & Gravity Thickener Buildings

INDEMNIFICATION AND HOLD HARMLESS PROVISION

- (1) It is understood and agreed by the parties that Contractor hereby assumes the entire responsibility and liability for any and all damages to persons or property caused by or resulting from or arising out of any act or omission on the part of Contractor or its employees, agents, servants, owners, principals, licensees, assigns or subcontractors of any tier (hereinafter "CONTRACTOR") under or in connection with this agreement and/or the provision of goods or services and the performance or failure to perform any work required thereby.
- (2) CONTRACTOR shall indemnify, save, hold harmless and defend the Lexington-Fayette Urban County Government and its elected and appointed officials, employees, agents, volunteers, and successors in interest (hereinafter "LFUCG") from and against all liability, damages, and losses, including but not limited to, demands, claims, obligations, causes of action, judgments, penalties, fines, liens, costs, expenses, interest, defense costs and reasonable attorney's fees that are in any way incidental to or connected with, or that arise or are alleged to have arisen, directly or indirectly, from or by CONTRACTOR's performance or breach of the agreement and/or the provision of goods or services provided that: (a) it is attributable to personal injury, bodily injury, sickness, or death, or to injury to or destruction of property (including the loss of use resulting therefrom), or to or from the negligent acts, errors or omissions or willful misconduct of the CONTRACTOR; and (b) not caused solely by the active negligence or willful misconduct of LFUCG.
- (3) In the event LFUCG is alleged to be liable based upon the above, CONTRACTOR shall defend such allegations and shall bear all costs, fees and expenses of such defense, including but not limited to, all reasonable attorneys' fees and expenses, court costs, and expert witness fees and expenses, using attorneys approved in writing by LFUCG, which approval shall not be unreasonably withheld.
- (4) These provisions shall in no way be limited by any financial responsibility or insurance requirements, and shall survive the termination of this agreement.

FINANCIAL RESPONSIBILITY

BIDDER/CONTRACTOR understands and agrees that it shall, prior to final acceptance of its bid and the commencement of any work, demonstrate the ability to assure compliance with the above Indemnity provisions and these other risk management provisions.

INSURANCE REQUIREMENTS

YOUR ATTENTION IS DIRECTED TO THE INSURANCE REQUIREMENTS BELOW, AAND YOU MAY NEED TO CONFER WITH YOUR INSURANCE AGENTS, BROKERS, OR CARRIERS TO DETERMINE IN ADVANCE OF SUBMISSION OF A RESPONSE THE AVAILABILITY OF THE INSURANCE COVERAGES AND ENDORSEMENTS REQUIRED HEREIN. IF YOU FAIL TO COMPLY WITH THE INSURANCE REQUIREMENTS BELOW, YOU MAY BE DISQUALIFIED FROM AWARD OF THE CONTRACT.

Required Insurance Coverage

BIDDER/CONTRACTOR shall procure and maintain for the duration of this contract the following or equivalent insurance policies at no less than the limits shown below and cause its subcontractors to maintain similar insurance with limits acceptable to LFUCG in order to protect LFUCG against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the work hereunder by CONTRACTOR. The cost of such insurance shall be included in any bid:

<u>Coverage</u>	<u>Limits</u>
General Liability (Insurance Services Office Form CG 00 01)	\$1 million per occurrence, \$2 million aggregate or \$ 2 million combined single limit
Commercial Automobile Liability (Insurance Services Office Form CA 0001)	combined single, \$1 million per occurrence
Worker's Compensation	Statutory
Employer's Liability	\$500,000.00

The policies above shall contain the following conditions:

- a. All Certificates of Insurance forms used by the insurance carrier shall be properly filed and approved by the Department of Insurance for the Commonwealth of Kentucky (DOI). LFUCG shall be named as an additional insured in the General Liability Policy and Commercial Automobile Liability Policy using the Kentucky DOI approved forms.
- b. The General Liability Policy shall be primary to any insurance or self-insurance retained by LFUCG.
- c. The General Liability Policy shall include Products and Completed Operations coverage and will include Products Liability Coverage or endorsement to the CGL policy.
- d. LFUCG shall be provided at least 30 days advance written notice via certified mail, return receipt requested, in the event any of the required policies are canceled or non-renewed.
- e. Said coverage shall be written by insurers acceptable to LFUCG and shall be in a form acceptable to LFUCG. Insurance placed with insurers with a rating classification of no less than Excellent (A or A-) and a financial size category of no less than VIII, as defined by the most current Best's Key Rating Guide shall be deemed automatically acceptable.

Renewals

After insurance has been approved by LFUCG, evidence of renewal of an expiring policy must be submitted to LFUCG, and may be submitted on a manually signed renewal endorsement form. If the policy or carrier has changed, however, new evidence of coverage must be submitted in accordance with these Insurance Requirements.

Deductibles and Self-Insured Programs

IF YOU INTEND TO SUBMIT A SELF-INSURANCE PLAN IT MUST BE FORWARDED TO LEXINGTON-FAYETTE URBAN COUNTY GOVERNMENT, DIVISION OF RISK MANAGEMENT, 200 EAST MAIN STREET, LEXINGTON, KENTUCKY 40507 NO LATER THAN A MINIMUM OF FIVE (5)

WORKING DAYS PRIOR TO THE RESPONSE DATE Self-insurance programs, deductibles, and self-insured retentions in insurance policies are subject to separate approval by Lexington-Fayette Urban County Government's Division of Risk Management, upon review of evidence of BIDDER/CONTRACTOR's financial capacity to respond to claims. Any such programs or retentions must provide LFUCG with at least the same protection from liability and defense of suits as would be afforded by first-dollar insurance coverage. If BIDDER/CONTRACTOR satisfies any portion of the insurance requirements through deductibles, self-insurance programs, or self-insured retentions, BIDDER/CONTRACTOR agrees to provide Lexington-Fayette Urban County Government, Division of Risk Management, the following data prior to the final acceptance of bid and the commencement of any work:

- a. Latest audited financial statement, including auditor's notes.
- b. Any records of any self-insured trust fund plan or policy and related accounting statements.
- c. Actuarial funding reports or retained losses.
- d. Risk Management Manual or a description of the self-insurance and risk management program.
- e. A claim loss run summary for the previous five (5) years.
- f. Self-Insured Associations will be considered.

Safety and Loss Control

CONTRACTOR shall comply with all applicable federal, state, and local safety standards related to the performance of its works or services under this Agreement and take necessary action to protect the life, health and safety and property of all of its personnel on the job site, the public, and LFUCG.

Verification of Coverage

BIDDER/CONTRACTOR agrees to furnish LFUCG with all applicable Certificates of Insurance signed by a person authorized by the insurer to bind coverage on its behalf prior to final award, and if requested, shall provide LFUCG copies of all insurance policies, including all endorsements.

Right to Review, Audit and Inspect

CONTRACTOR understands and agrees that LFUCG may review, audit and inspect any and all of its records and operations to insure compliance with these Insurance Requirements.

DEFAULT

BIDDER/CONTRACTOR understands and agrees that the failure to comply with any of these insurance, safety, or loss control provisions shall constitute default and that LFUCG may elect at its option any single remedy or penalty or any combination of remedies and penalties, as available, including but not limited to purchasing insurance and charging BIDDER/CONTRACTOR for any such insurance premiums purchased, or suspending or terminating the work.

Bid Specifications
 For
 In-Line Shredder/Grinder Unit
 For
 Town Branch WWTP
 Primary Digester and Gravity Thickener Buildings

GENERAL

1. The successful Bidder will provide/supply five (5) In-Line Shredder/Grinder Unit(s), **equipment only**, for use in the Primary Digester and Gravity Thickener Buildings located at the Town Branch Wastewater Treatment Plant which is owned and operated by the Lexington Fayette Urban County Government Division of Water Quality.
2. Installation of In-Line Shredder/Grinder Unit(s) and associated accessories to be performed by DWQ personnel.
3. A copy of this specification with each paragraph check marked to show specification compliance or marked to show deviations. All exceptions must be clearly noted and detailed. The LFUCG reserves the right to disallow any bid due to exception.

SCOPE OF SUPPLY

1. Provide/supply new In-Line Shredder/Grinder Unit(s) and associated accessories as specified.

GENERAL REQUIREMENTS

1. In-Line Shredder/Grinder Unit must include the following:
 - a. Shredder/Grinder Unit
 - b. Motor and Drive
 - c. Automatic Reversing Controller
 - d. Startup Services

Specification Compliant	
Yes	No
x	

2. The shredder/grinder shall be designed to reduce solids normally found in a waste water treatment facility

Specification Compliant	
Yes	No
x	

3. **The shredder/grinder:** shall consist of a spherical cutting mechanism consisting of two (2) working elements: A single spherical rotor with a center open to flow containing a rack of stainless steel cutters skewed at 10 degrees; and a concave stationary cutting assembly. Units with a multitude of individual cutter discs shall not be acceptable. The rotor teeth shall pass at close clearance through the cutting portion of the stationary cutting assembly intensively shredding over-size solids and further sweep the slots between curved sizing bars clear of solids. A high percentage of open area shall be maintained to flow throughout the unit. The unit shall have bi-directional cutters. With these cutters, the unit shall operate equally in either direction of rotation to provide enhanced cutter life, without requiring removal from the line.

Specification Compliant	
Yes	No
	x

4. **Materials:** The cutting elements shall be constructed of Stainless Steel and shall have a Chrome Boride coating with a Rockwell C of 60 or greater for extended life in gritty service. The cutting surface material shall meet ASTM G65 standard abrasion test for wear of less than 20mm. The machine housing shall be ductile iron or carbon steel. The unit shafting shall be constructed of heat treated 4140. 4130 steel cutters shall not be acceptable. To be considered equivalent, units with cutters hardness of less than Rockwell C of 60 shall be supplied with a full set of spares (per each unit(s) purchased).

Specification Compliant	
Yes	No
	x

5. **Configuration:** The unit shall have a straight-through, ultra-compact configuration, a removable cylindrical interior, and 125/150# ANSI input and output flanges. The connected pipeline orientation shall be horizontal. The unit shall have an 8" to 6" reducing flange on either end to facilitate the installation in a 6" pipeline. These reducing flanges shall incorporate two (2) hand hole clean outs to aid in the removal of any large un-grindable objects.

Specification Compliant	
Yes	No
	x

6. **Bearing and Seal Cartridge:** Two (2) cartridges shall be used each containing a three (3) stage seal system, a tapered roller bearing and unit shafting. Each cartridge shall be removable as one (1) piece with the shaft for easy seal or bearing replacement. The seal system shall consist of; a labyrinth seal, a severe duty mechanical seal, and a separately sealed bearing chamber.

Specification Compliant	
Yes	No
	x

- a. **Labyrinth Rings:** The contact-less labyrinth rings shall be supplied to further protect from coarse and fine granular contaminants.
- b. **Mechanical Seals:** The mechanical seals shall feature elastomeric members which operate as opposing disk springs when compressed and at the same time keeping the faces of the two (2) metallic rings together insuring positive sealing. No metal springs shall be used.

c. **Oil Seal:** The oil seal shall be used to further isolate the bearing chamber from contaminants

i. **Cartridge Lubricant shall be non-soluble Teflon grease.** No angular contact bearings shall be employed.

7. Reducer:

a. The speed reducer shall be grease-filled planetary or cycloidal type reducer with "Heavy-Shock" load classification. The high-speed shaft of the grinder shall be directly coupled with the reducer via a coupling.

Specification Compliant	
Yes	No
x	

b. The two-piece, three lobed coupling shall have jaws that intermesh by at least 3/4" for dependable torque transmission.

8. Motor: Non-Submersible

a. The motor shall be: (TEFC) design, 3 HP, 230/460 Volt, 3-phase, 60 Hz. Motor service factor shall be 1.15, the efficiency factor not less than 87.5% at full load and the power factor not less than 82% at full load.

Specification Compliant	
Yes	No
x	

b. A coupling adapter shall be used having registers for accurate alignment and smooth operation. The coupling adapter shall be sealed to prevent water contamination. The adapter shall be firmly connected to the input of the reducer and shall rigidly support the non-submersible motor weight.

9. Painting and Protective Coatings

a. Steel and cast iron surfaces are to be cleaned, primed and painted with one prime and one (1) finish coat, 3 to 5 mils per coat, Tnemec Series 66 Hi-Build Epoxoline (Epoxy Polyamide), Blue Color, Satin Finish.

Specification Compliant	
Yes	No
x	

10. Controller: The controller shall completely sequence the operation of the equipment covered by the job specification

Specification Compliant	
Yes	No
x	

11. Enclosure Type: The enclosure shall be NEMA 4X FRP. A provision shall be made within the enclosure for connection of a grounding cable.

Specification Compliant	
Yes	No
x	

12. The Controller shall contain the following features:

a. **Disconnect:** A disconnect means must be provided adjacent to the controller (by others). Terminal blocks only shall be provided for the primary feeder cables entering the controller enclosure.

Specification Compliant	
Yes	No
x	

b. **Motor Starter:** A reversing motor starter shall be provided for the motor indicated in the job specifications. The size of the starter shall be based on IEC requirements for the motor horsepower. A motor overload shall be furnished as part of the starting equipment. Tripping of the relay shall stop the motor and flash the trip light. Resetting the relay shall allow the motor to restart. Output terminals shall be provided for connection of the motor leads exiting enclosure.

c. **Control Circuit:** The following provisions apply:

i. **Voltage:** Nominally 120V with other levels determined by the requirements of the PLC and other control items supplied as part of the controller. If DC voltage is required, an adequately sized source of DC power must be provided within the controller.

Specification Compliant	
Yes	No
x	

ii. **Transformer:** Ungrounded primary and secondary side leads shall be fuse protected. The control transformer shall be sized to carry control-circuit load plus a minimum of 20% spare capacity for future load growth.

iii. **PLC:** A vendor standard programmable logic controller shall be provided within the controller.

d. **Operator Control:** A three position "HAND-Off/RESET-AUTO" selector switch shall be provided in the front cover.

Specification Compliant	
Yes	No
x	

i. Its function is as follows:

1. **Hand:** When in this position, the motor starter is energized and the motor runs under the control of the PLC as described in "Operation."
2. **Off/Reset:** When in this position, the motor shall be prevented from starting in both the forward and reverse direction; the signal from the remote-start dry contact shall be disabled; and if established, the Alarm Condition circuitry is reset.
3. **Auto:** In this position, when a remote Run signal is received, the motor shall cycle under the control of the PLC. The cycle shall be terminated if the run signal is interrupted, or the selector switch is placed in the Off/Reset position, or if the equipment experiences an Alarm Condition shutdown.

e. **Indicating Lights:** The following LED indicators shall be provided:

Specification Compliant	
Yes	No
x	

- i. A white "POWER ON" indicating light shall be illuminated when power is available in the control circuit.
- ii. A green "RUN" indicating light shall be illuminated when the selector switch is in the "Hand" or "Auto" position with the equipment motor running in the forward or reverse direction; and during motor reversal pauses.
- iii. A red "Trip" indicating light shall be illuminated steadily when the selector switch is in the "Hand" or "Auto" position and the equipment has experienced an Alarm Condition stoppage.
- iv. The red "Trip" indicating light shall flash when the motor overload relay trips.
- v. The red "Trip" indicating light shall "double flash" when the motor winding temperature causes the embedded thermostats to open (standard feature for explosion-proof motor).

f. **Remote I/Os:** The following inputs and outputs shall be supplied. Wiring shall be complete from the PLC to the terminal blocks.

Specification Compliant	
Yes	No
x	

- i. **Run Status:** A normally open dry-contact output shall close when the equipment motor is running (and during motor reversal pauses). It shall open when the equipment is stopped, trips on an Alarm Condition, or power to the controller is disconnected.

- ii. **Trip Status:** A normally open dry-contact output shall close when the equipment experiences an Alarm Condition stoppage. It shall open when the Alarm Condition lockout circuit has been reset. The contact shall also close and remain closed (no pulsing) when the motor overload relay trips. It shall open when the relay is reset.
 - iii. **Remote E-Stop:** Provision shall be made for a maintained-contact pushbutton (by others) that shall disconnect control voltage within the enclosure. These terminals shall be jumpered (to be removed if an E-Stop is installed).
 - iv. **Remote Start:** Provisions shall be made to accept a remote contact closure input (by others) that starts the cycle when the selector switch is in the "Auto" position.
- g. **Instrumentation:** The following items shall be included as part of the controls of the subject equipment:

Specification Compliant	
Yes	No
x	

- i. **Current Sensor:** One phase shall be monitored for a high current condition with a current sensor and current relay. If the phase current reaches an adjustable set point (factory set at approximately 80% of locked-rotor current), the motor starter shall be de-energized and after a two-second delay (adjustable), an "Auto-Clear" sequence as described below shall be initiated.
 - 1. Only during initial starting, the current sensor C/S signal to the PLC shall be blocked by a time-delay relay (adjustable) during the motor inrush current period.

- h. **Operation:** The mode of operation shall be a momentary reversing grinder that will normally operate in only one direction. The mode, as well as timer settings and reversals, shall be accessible to allow change to meet field conditions. Placing the selector switch in the "Hand" or (when a remote run signal is received, if in the "Auto" position), shall energize the "reverse" motor starter and the equipment rotates in that direction for two (2) seconds (adjustable) before the reverse starter coil is de-energized. After a delay of two (2) seconds (adjustable) to allow the equipment to coast to stop, the equipment shall run continuously in the "forward" direction of rotation. It shall continue to run in this direction until the motor starter is de-energized by interrupting the remote-run signal, or by turning the selector switch to the "Off" position, or if the equipment experiences a jam condition.

Specification Compliant	
Yes	No
x	

- i. **Auto-Clear Cycle:** If the phase current reaches an adjustable set-point (factory set) while running, the motor starter shall be de-energized. After a delay of two (2) seconds to allow equipment to coast to stop, the sequence described above for a normal starting cycle shall be initiated in an attempt to clear the Jam condition. This automatic auto-clear shall repeat a total of four (4) times. If at any time the equipment runs for more than 30 seconds continuously in the forward direction during the four (4) attempts, the reversal counter shall be reset.

- ii. **Alarm Condition:** If after four (4) tries, however, the Jam condition still exists, the forward starter coil shall be de-energized, and after two (2) second delay, the reverse starter coil shall be energized for one (1) second then be de-energized. An Alarm Condition lockout circuit shall then be established and remain in alarm state (**even if power is lost**) until it is reset. The lockout circuit shall disable the automatic cycle; cause the "Trip" pilot light to be illuminated, "Trip Status" contact to close, the "Running" pilot light to be extinguished, and the "Run Status" contact to open. Once the obstruction has been cleared, the "Alarm Condition" lockout circuit can be reset by moving the selector switch to "Off/Reset" position.

DETAILED REQUIREMENTS

1. In-Line Shredder/Grinder shall be the model SS6-8000 Super Shredder® as manufactured by Franklin Miller Inc or Owner approved equal, constructed as follows:

- i. Flanged housing – Ductile Iron
- ii. 6" ANSI inlet and discharge flange
- iii. Spherical rotor and Replaceable Stationary Bar Liner
- iv. Cutters constructed in Stainless Steel
- v. Cutting Elements **Hardfaced with Chrome Boride** to a hardness exceeding Rc62
- vi. Tapered Roller Bearings
- vii. Severe-Duty Mechanical Seals with T.C. seal faces
- viii. Bearing/Seal Cartridge Design

Specification Compliant	
Yes	No
	x

2. Motor and Drive Including:

- i. 3HP TEFC C-Face Motor, 230/460V, 3PH, 60 HZ
- ii. Sumitomo Vertical Down, Grease Filled Reducer
- iii. Coupling: High torque Jaw Style

Specification Compliant	
Yes	No
x	

3. Automatic Reversing Controller, Model S260 as manufactured by Franklin Miller Inc, or Owner approved equal:

- i. NEMA 4X FRP Enclosure
- ii. PLC Logic Control
- iii. IEC Starters
- iv. LED Indicators – for long life
- v. Current Sensing Auto-Reversing Program

Specification Compliant	
Yes	No
x	

4. Startup Services:

- i. Two (2) Days, up to eight (8) hours per day

Specification Compliant	
Yes	No
x	

5. **Factory Test:** Each Shredder/Grinder and Controller shall be factory tested to ensure satisfactory operation.

Specification Compliant	
Yes	No
x	

6. **Installation:** Shredder/Grinder and Controller shall be installed by DWQ personnel in accordance with the supplier's installation instructions, and in accordance with all OSHA, local, state, and federal codes and regulations.

Specification Compliant	
Yes	No
x	

7. **Operation and Maintenance Manuals:**

A. Supplier shall provide two (2) hard copies and one (1) electronic version, if available, Operation and Maintenance Manuals. The manuals shall include equipment descriptions, operating instructions, drawings, troubleshooting techniques, a recommended maintenance schedule, and the recommended lubricants.

Specification Compliant	
Yes	No
x	

SUBMITTALS

1. Copy of the manufacturer's equipment warranty detailing the duration of the warranty and all limitations of the warranty.

Specification Compliant	
Yes	No
x	

2. A copy of this specification with each paragraph check marked to show specification compliance or marked to show deviations. All exceptions must be clearly noted and detailed. The LFUCG reserves the right to disallow any bid due to exception

Specification Compliant	
Yes	No
x	

3. All equipment and materials shall be new and shall be specially designed or selected for the function and service specified.

Specification Compliant	
Yes	No
x	

4. Operation and Maintenance Manuals: Prior to delivery of equipment and up-dated as required during the installation of the equipment, the Manufacturer shall furnish complete and detailed installation, operation, and maintenance manuals, minimum of two (2) hard copies, which shall include the following information as a minimum requirement:

Specification Compliant	
Yes	No
x	

- a. Name, address, and phone number of nearest competent service organization who can supply parts and service. If this is not the Manufacturer's own service department, then furnish the letters confirming that the named organization has been factory authorized to represent the manufacturer of the equipment furnished.
- b. Installation, operation, and maintenance brochures.
- c. All required operating instructions.
- d. All required maintenance instructions including schedules of routine maintenance.

Please write in the unit price per item below.

Quantity	Item	Description	Unit Price	Total Price
5	Inline Shredder/Grinder (equipment only)	Inline Shredder/Grinder Unit(s) and Controller(s) as specified, Franklin Miller Model SS6-8000 Super Shredder®, motor and drive, and Automatic Reversing Controller Model S260 , or Owner approved equal	\$10,997	\$ 54,985

SPECIAL INSTRUCTIONS TO BIDDER:

- For bidding questions contact Betty Landrum, Division of Central Purchasing, @ 859-258-3329.



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290 Paularino Avenue
Costa Mesa, CA 92626 USA
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fax (949) 833-8858
jwce@jwce.com

March 19, 2014

Lexington Fayette Urban County Government
In-Line Shredder/Grinder
TB WWTP Primary Digester & Gravity Thickener Buildings
Invitation for Bid Number 55-2014

BID SPECIFICATIONS EXECPTIONS

General Requirements

Item 3: Grinder shall be two shafted design consisting of individual cutters and spacers. Shafts shall rotate at slightly different speeds to help clean out solids and create scissor cutting action. Main body housing shall have integral side wall deflectors to direct solids into cutters. Twin shaft design capable of grinding a wider variety of solids than single shafted machines.

Item 4: Cutter shall be an individual disk constructed of AISI 8620 alloy steel. Cutters shall be heat treated to produce a hardness of 60-65 Rockwell C. Main body, gear, base, and end housings shall be ASTM A536-84 ductile iron. Shafts shall be ASTM 4140 hardened alloy steel.

Item 5: Grinder shall have a single piece main body housing consisting of pipe flanges and inspection ports. Cutter cartridge shall be removable with the main body housing remaining installed in pipeline. Inlet and outlet flanges will be ANSI Class 150 machined to 6" pipe flange size. Inspection port covers shall be on both inlet and outlet sides of main body housing.

Item 6: Four (4) Seal/Bearing cartridges shall be used. Cartridge shall use sealed, oversized, deep-groove ball bearings. Each cartridge removable as one piece for easier installation and maintenance. Seal cartridges shall not require flushing.

Detailed Requirements

1. In-Line Shredder/Grinder shall be JWC Environmental Series 30004T -1206 Muffin Monster
 - i. Flanged housing – Ductile Iron
 - ii. 6" ANSI inlet and discharge flange
 - iii. Individual cutters and spacers
 - iv. Cutters constructed of AISI 8620 alloy steel
 - v. Cutters shall be heat treated to produce a hardness of 60-65 Rockwell C
 - vi. Deep groove ball bearings
 - vii. High pressure mechanical seals with tungsten carbide seal faces
 - viii. Bearing/Seal Cartridge Design

www.jwce.com





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COMMERCIAL CLARIFICATIONS

1. Bidder's pricing is lump sum based on FOB Origin Freight Prepaid and Allowed
2. Bidder's warranty terms are fully described in the attached Manufacturer's Standard Warranty
3. Bidder will indemnify for bidder's own negligent acts or omissions. In case of concurrent negligence, bidder's indemnity will be proportional.

www.jwce.com





JWC
Environmental®

Trust Monster Quality™



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The JWC Muffin Monster (www.jwce.com) being quoted does not meet certain requirements of the specification. This is not because of inherent deficiencies but because the Muffin Monster is superior. The enclosed information describes the Muffin Monster and JWC Service. They include brochures, specifications and drawings. We hope that your real world experience with the two operating Muffin Monsters at your Town Branch WWTP attest to its superiority. It is our understanding that they have provided excellent service. The Henry P. Thompson Company (www.hpthompson.com) has represented JWC Environmental since 1973 when the Muffin Monster was invented and supplanted single shafted comminutor technology which was okay for toilet paper but failed to deal with various plastic products new to the market at that time. The Henry P. Thompson Company has been providing water and wastewater solutions since 1910 including full service of the equipment that it sells and including an emergency call in hotline.

JWC Environmental invented the rugged and popular dual shafted Muffin Monster grinder to shred materials capable of disrupting your system by grinding sewage and sludge to protect pumps and centrifuges and other downstream process equipment. With more than 40 years experience and continued product development, JWC now has more than 20,000 installed units including municipal wastewater treatment plants and pumps stations, Federal and State prisons and local jails and industrial applications including pulp and paper industry, petroleum industry and food processing. This includes many installations in Kentucky including yours, the many installations in the Louisville MSD system, Federal and state prisons and jails. The total number of JWC installations is way more than all of their competitors combined.

The nature of wastewater continues to change. The Muffin Monster's dual-shafted technology and specially designed robust, high torque, trap and shear cutters are particularly suited to deal with the latest plague of "non dispersible" products flushed down the toilet. Municipalities across the nation are experiencing increased incidences of clogged pumps, clogged lines, gravity sewer blockages, and occasional dry weather sanitary sewer overflows attributed to the growing prevalence of disposable or "flushable" wipes and other such products in the marketplace collectively known as non dispersible products.

The in line Muffin Monster being quoted includes a quick-change cutter cartridge assembly for ease of servicing. See the picture in the enclosed brochure. The Muffin Monster uses a lifetime lubricated cartridge seal and bearing assembly with high pressure rating of 90 PSI (6 bar). No seal flush is required and there is no packing gland to adjust. The Muffin Monster includes high-flow side rails which increase flow rate, keeps head loss to a minimum and very importantly deflects solids into the cutting chamber to minimize bypassing. The dual shafted Muffin Monster grinder is capable of grinding a wider variety of solids than single shafted machines. Each shaft rotates at different and low rotational speeds (about 40 rpm and 60 rpm) in order to assure high torque and fewer interrupts. Not only do the shafts operate at different and low rpms, they counter rotate to ensure a trap and shear affect. Various cutter combinations are available to ensure optimum performance for the various applications such as this one.

www.jwce.com





JWC
Environmental®

Trust Monster Quality™



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jwce@jwce.com

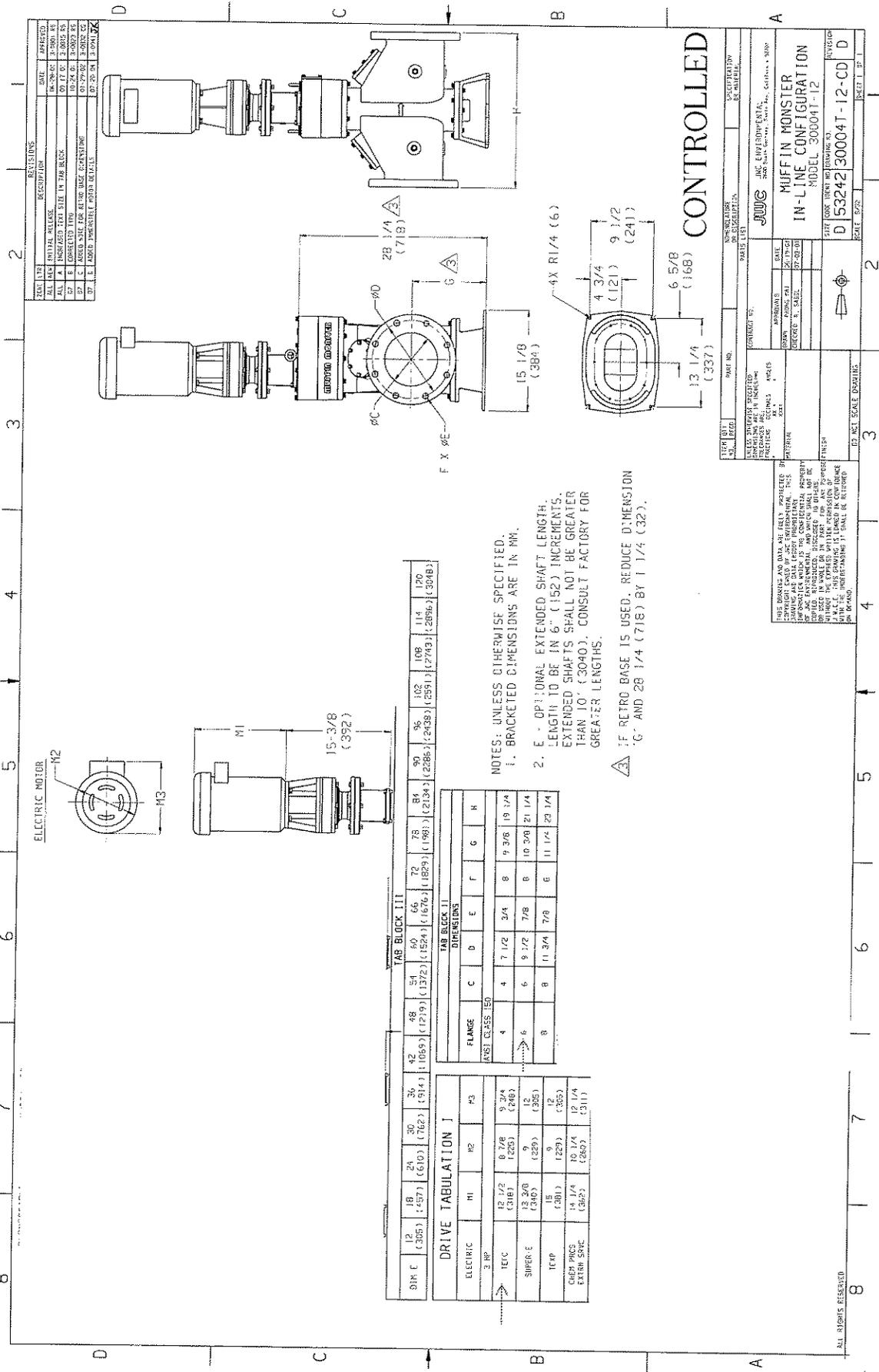
The running torque is 4,756 in-lbs per horsepower at momentary load peaks. The cutters exert a minimum force at the tooth tip of 2,051 lbs per horsepower during momentary load peaks. The cutters are 8620 heat treated alloy steel with a hardness of 60-65 Rockwell C. Spacers are 4130 heat treated alloy steel, surface ground for uniformity and through-hardened to a minimum 45-50 Rockwell "C". The shafts are 4140 heat treated hexagonal steel. The end housings and covers are cast from ASTM A536 Ductile Iron. The seal faces are Tungsten Carbide / Tungsten Carbide. The side rails are cast from ASTM A536 Ductile Iron. The elastomers are Buna N®. This quotation includes automated PLC monitoring and controls for each unit featuring automatic load sensing and a reversing function for protection.



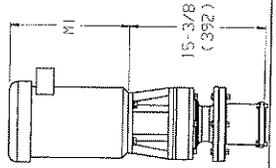
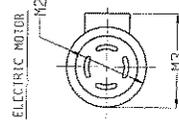
www.jwce.com



UNCONTROLLED COPY



REV	DATE	REVISIONS
1	00-10-67	INITIAL RELEASE
2	00-10-67	INCREASED SHAFT SIZE IN TAB BLOCK
3	00-10-67	COMPLETED TYPING
4	01-29-67	ASSIGNED SIZE FOR RETRO BASE PART NUMBER
5	01-29-67	TRANSFERRED TO THIS DRAWING
6	01-29-67	REVISED TO SHOW 1/4" RETRO BASE



TAB BLOCK III																			
318 E	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96	102	108	114	120
	(305)	(457)	(610)	(762)	(914)	(1065)	(1219)	(1372)	(1524)	(1676)	(1829)	(1981)	(2134)	(2286)	(2438)	(2591)	(2743)	(2896)	(3048)

TAB BLOCK II									
DIMENSIONS									
FLANGE	C	D	E	F	G	H			
4	4	7 1/2	3/4	8	9 3/8	19 1/4			
6	6	9 1/2	7/8	8	10 3/8	21 1/4			
8	8	11 3/4	7/8	8	11 1/4	23 1/4			

DRIVE TABULATION I			
ELECTRIC	M1	M2	M3
3 HP	12 1/2 (316)	6 7/8 (175)	9 3/4 (246)
TEC	13 3/8 (340)	9 (229)	12 (305)
ICP	15 (381)	9 (229)	12 (305)
CHOP PRCS	14 1/4 (362)	10 1/4 (265)	12 1/4 (311)
EXTRN SYNC			

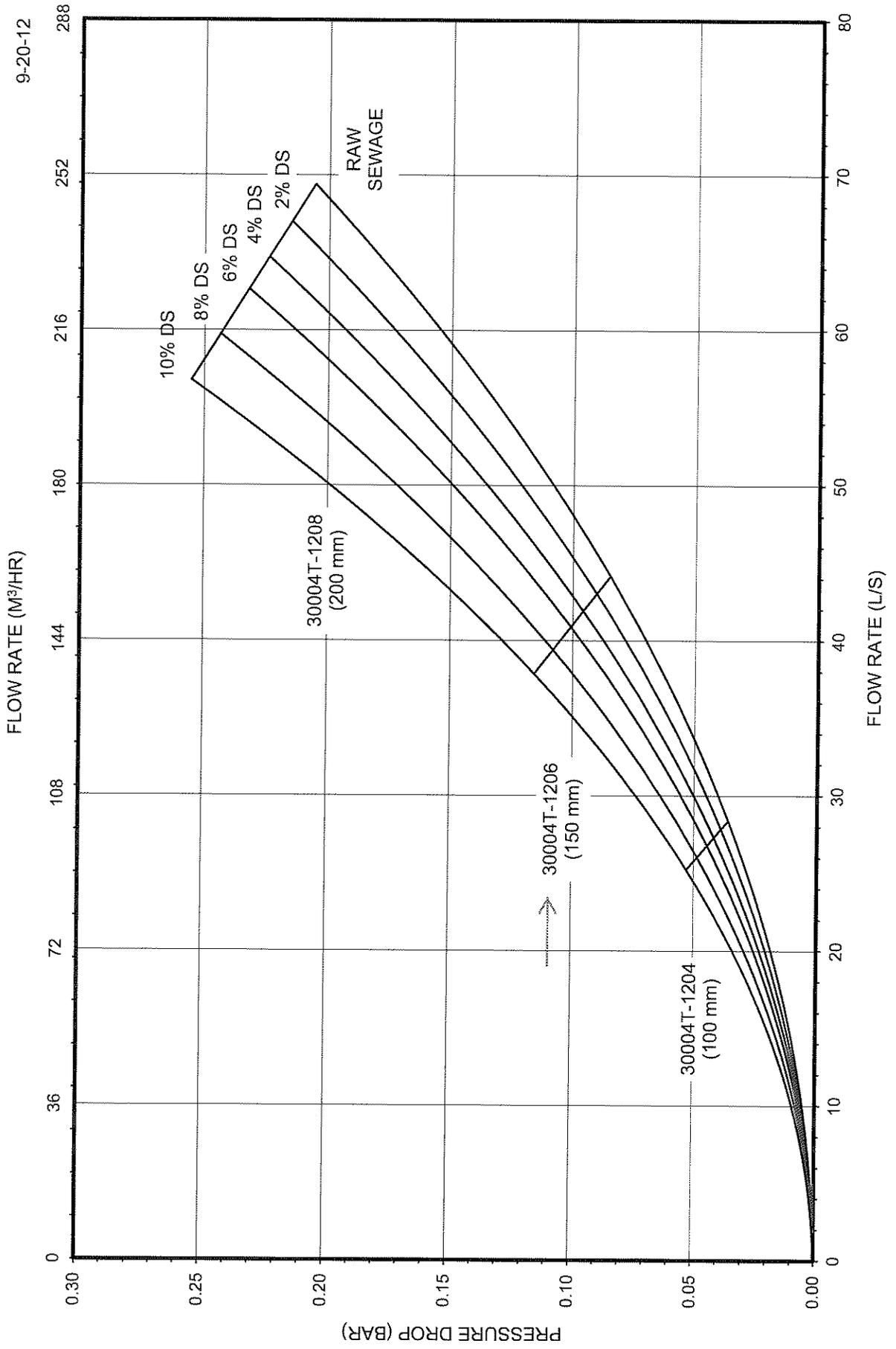
NOTES: UNLESS OTHERWISE SPECIFIED,
 1. BRACKETED DIMENSIONS ARE IN MM.
 2. E - OPTIONAL EXTENDED SHAFT LENGTH. EXTENDED SHAFTS SHALL NOT BE GREATER THAN 10" (304.8). CONSULT FACTORY FOR GREATER LENGTHS.
 3. IF RETRO BASE IS USED, REDUCE DIMENSION 'G' AND 28 1/4 (718) BY 1 1/4 (32).

CONTROLLED

TEST BY: _____	DATE: _____	SCALE: _____	SHEET: 1 OF 1
DESIGN: _____	DATE: _____	SCALE: _____	SHEET: 1 OF 1
CHECKED BY: _____	DATE: _____	SCALE: _____	SHEET: 1 OF 1
APPROVED BY: _____	DATE: _____	SCALE: _____	SHEET: 1 OF 1
MUFF IN MONSTER IN-LINE CONFIGURATION MODEL 300041-12			
TYPE: 400V THREE PHASE WINDING D: 53242 300041-12-CD D			

ALL RIGHTS RESERVED

MODEL 30004T-12



SECTION 11330

MUFFIN MONSTER® IN-LINE - ELECTRIC GRINDER – SERIES 30004T (2-Inch Hex Design-TEFC Motor/PC2200 Controller)

PART 1 GENERAL

1.1 SUMMARY

- A. This section of the specification describes the grinder(s) and controller(s). The equipment shall be installed as shown on the plans, as recommended by the supplier, and in compliance with all OSHA, local, state and federal codes and regulations.
- B. The number of Muffin Monster(s) and controller(s) shall be 5.

1.2 REFERENCES

- A. Grinder(s) shall, as applicable, meet the requirements of the following industry standards:
 - 1. American Society for Testing and Materials (ASTM) A36: Carbon Steel Plate
 - 2. American Society for Testing and Materials (ASTM) A536-84: Ferritic Ductile Iron Castings
 - 3. American Society for Testing and Materials (ASTM) A48-83: Grey Iron Casting
 - 4. American Society for Testing and Materials (ASTM) A743 Stainless Steel Casting
 - 5. American National Standards Institute (ANSI) B16.42-1979, Class 150 Flanges
 - 6. American Iron and Steel Institute (AISI) 303 Stainless Steel
 - 7. American Iron and Steel Institute (AISI) 304 Stainless Steel
 - 8. American Iron and Steel Institute (AISI) 316 Stainless Steel
 - 9. American Iron and Steel Institute (AISI) 4130 Heat Treated Alloy Steel
 - 10. American Iron and Steel Institute (AISI) 4140 Heat Treated Alloy Steel
 - 11. American Iron and Steel Institute (AISI) 8620 Heat Treated Alloy Steel
 - 12. American Iron and Steel Institute (AISI) 17-4 Stainless Steel
 - 13. Society of Automotive Engineers (SAE) 660 Bearing Bronze
- B. Controllers shall, as applicable, meet the requirements of the following Regulatory Agencies:
 - 1. National Electrical Manufacturer's Association (NEMA) Standards
 - 2. National Electric Code (NEC)
 - 3. Underwriters Laboratory (UL and cUL)
 - 4. International Electrotechnical Commission (IEC)

PART 1 GENERAL (Cont'd)

1.3 DOCUMENTS

A. Submittals

Supplier shall submit six (6) sets of submittals. Submittals shall include equipment descriptions, functional descriptions, dimensional and assembly drawings, catalog data, and job specific drawings.

B. Operation and Maintenance Manuals.

The supplier shall provide three (3) Operation & Maintenance manuals. An electronic version shall be supplied to create additional copies. The manuals shall include equipment descriptions, operating instructions, drawings, troubleshooting techniques, a recommended schedule, and the recommended lubricants.

1.4 QUALITY ASSURANCE

A. Identification

1. Equipment shall be identified with a corrosion resistant nameplate affixed in a conspicuous location.
2. Nameplate information shall include manufacturer's name and address, equipment model number, and serial number.

B. Manufacturer

1. Supplier shall be ISO9001 certified and have a minimum 30 years experience as a manufacturer of municipal waste water equipment and a minimum 5,000 prior installations of similar equipment.
2. Supplier shall provide a list of reference sites for similar equipment for verification by the Engineer or Owner's Representative.
3. Supplier shall conduct factory testing and verification of equipment prior to shipment.
4. Supplier shall have factory owned bi-coastal service centers.

C. Installation & Start-up

1. Supplier shall provide services of a factory trained representative to check installation and review start-up of equipment and controls.
2. Supplier Representative shall inspect and approve site installation and supervise a review of the operation of the equipment.
3. Supplier Representative shall provide training on operation and maintenance requirements of the equipment.

PART 1 GENERAL (Cont'd.)

1.5 DELIVERY, STORAGE, AND HANDLING

A. Packaging

1. Containers or skids shall be constructed for normal shipping, handling, and storage.
2. Containers shall provide adequate protection for the equipment in a dry indoor environment between +40° F (+4.5° C) and +100° F (+37.8° C).

1.6 WARRANTY

Manufacturer's standard 12-month limited warranty shall be provided on equipment.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Grinder(s) and controller(s) shall be in accordance with these specification and plans and shall be supplied by one of the following manufacturers:
 1. JWC Environmental, 290 Paularino Ave, Costa Mesa, CA 92626; Tel: 800-331-2277
www.jwce.com
JWC Environmental Series 30004T - 1206Muffin Monster.
JWC Environmental Series PC2200 Controller.
 2. Approved equal.
- B. Manufacturers requesting to be selected as an approved equal shall submit certified documentation including installation lists with phone numbers, equipment drawings, flow performance curves, electrical schematics and cut sheets, O&M draft showing compliance with these specifications a minimum of ten (10) days prior to bid opening. Selected equipment manufacturers shall be added to the list of approved manufacturers.
- C. Selected approved equal manufacturers shall conduct an onsite test within ten (10) days of installation demonstrating compliance with all areas of this specification.

2.2 GRINDER

A. General

Grinder shall reduce or shred influent solids for protection of downstream equipment. Grinder shall be two shafted design consisting of individual cutters and spacers. Grinder shall have a single piece main body housing consisting of pipe flanges and inspection ports. Cutter cartridge shall be removable with the main body housing remaining in situ. Grinder shall have motor and speed reducer for cutter drive.

B. Components

1. Cutters and Spacers

- a. Cutting stack shall be a nominal height of 12 inches.
- b. Cutter shall be an individual disk constructed of AISI 8620 alloy steel surface ground to thickness of .310-inches +.000/-.001 (7.9 mm +.000/-.003).

PART 2 PRODUCTS (Cont'd)

2.2 GRINDER (Cont'd)

B. Components (Cont'd)

1. Cutters and Spacers (Cont'd)

- c. Cutters shall be heat treated to produce a hardness of 60-65 Rockwell C.
- d. Cutters shall have 11 cam shaped teeth. Tooth height shall not be greater than ½-inch (13 mm) above the root diameter of the cutter. OD shall be 4.71-inches (120 mm).
- e. Spacers shall be an individual disk constructed of AISI 8620 alloy steel surface ground to a thickness of .319-inches +.001/-.000 (8.1 mm +.003/-.000).
- f. Spacers shall have a hardness of 34-38 Rockwell C.
- g. Spacers shall have a smooth outside diameter with no tooth profiles.

2. Shafts

- a. Shafts shall be ASTM 4140 alloy steel with a minimum tensile strength of 149,000 PSI (1,027 kPA).
- b. Shafts shall measure nominal 2-inches (51 mm) across flats of hex.
- c. Shafts shall be hardened to 38-42 Rockwell C.

3. Intermediate Shaft Supports

- a. Intermediate shaft supports shall be ASTM A743 stainless steel, AISI 17-4 stainless steel and SAE 660 bearing bronze.
- b. Shaft supports shall be lubricated with high temperature marine grade grease at the factory.
- c. Intermediate shaft supports shall provide additional support to the shafts during severe grinding demands.
- d. Intermediate shaft supports shall be provided only for cutter stacks of 24 inches (610 mm).

4. Seal Cartridges

- a. Seal cartridges shall be rated to a maximum of 90 PSI (620 kPA).
- b. Seal cartridges shall not require flushing.
- c. Dynamic and rotating seal faces shall be tungsten carbide with 6% nickel binder.
- d. O-rings shall be Buna-N (Nitrile).
- e. Radial and axial loads shall be borne by sealed, oversized, deep-groove ball bearings.

PART 2 PRODUCTS (Cont'd)

2.2 GRINDER (Cont'd)

B. Components (Cont'd)

5. Housings and Covers

- a. Main body, gear, base, and end housings shall be ASTM A536-84 ductile iron.
- b. Top cover and inspection port covers shall be ASTM A536-84 ductile iron.
- c. Main body housing shall have inlet and outlet flanges with bolt pattern machined to _____ pipe flange size.
- d. Main body housing shall have integral side wall deflectors to direct solids into cutters.
- e. Inspection port covers shall be on both inlet and outlet sides of main body housing.
- f. End housing shall have integral bushing deflectors to guide solids away from seal cartridges.

6. Speed Reducer

- a. Reducer shall be manufactured by Sumitomo Machinery Corporation of America.
- b. Reducer shall be internal planetary mechanism with trochoidal curved tooth profile.
- c. Reducer shall be a vertically mounted with 29:1 single reduction.
- d. Reducer shall be grease lubricated.

7. Motor

- a. Motor shall be manufactured by Baldor Electric Company.
- b. Motor shall be 3 hp, TEFC, 1725 rpm, 230/460 volt, 3 phase, 60 Hz
- c. Motor shall have a minimum service factor of 1.15, 84% minimum efficiency factor at full load, minimum 82% power factor at full load.

C. Performance

1. Grinder shall be capable of processing 600 GPM.
2. Grinder shall provide a minimum peak shaft torque of 4,756 lb-in/hp (721 Nm/kW).
3. Grinder shall provide a minimum peak force at cutter tip of 2,051 lb_r/hp (12,234 N/kW).

PART 2 PRODUCTS (Cont'd)

2.3 CONTROLLER

A. General

Controller shall provide control of the grinder and be designed to control one (1) 3 hp motor at 460 volts, 3 phase, 60 Hz. The controller shall have an indicator lights, switches and other control devices.

B. Components

1. Enclosures

- a. Enclosure shall be fiberglass reinforced polyester NEMA 4X .
- b. Enclosure shall house the control devices, motor starters, and PLC.

2. Grinder ON-OFF/RESET-REMOTE three-position 22mm type, NEMA 4X selector switch

- a. In the OFF/RESET position, the grinder shall not run.
- b. In the ON position, the grinder shall run continuously.
- c. In the REMOTE position, the grinder shall start and stop as controlled by an external device.
- d. Selector switch shall be the only method for resetting the controller after failure.

3. Pilot Lights

- a. Lights shall be LED type 22 mm, rated NEMA 4X.
- b. Lights shall indicate POWER ON, RUN, and FAIL.

4. Programmable Logic Controller (PLC)

- a. PLC shall be manufactured by Panasonic.
- b. PLC shall have a minimum of 16K of memory.

5. Motor Starter

- a. Starter shall be a full-voltage reversing type with 120 volt operating coils.
- b. Overload relays shall be adjustable and sized to full load amperes (FLA) of the motor.

6. Control Transformer

- a. Control transformer shall be minimum 130 VA.
- b. Control transformer primary and secondary shall be fused for over current protection.

7. Current Transducer

- a. Current transducer shall be manufactured by Veris Industries.

PART 2 PRODUCTS (Cont'd)

2.3 CONTROLLER (Cont'd)

7. Current Transducer (Cont'd)

- b. Current transducer shall have adjustable set point from 1-135A with 200 ms or less response time.

C. Performance

1. When a grinder jam obstruction occurs, the controller shall stop the grinder and reverse the rotation to clear the obstruction. If the obstruction is cleared, the controller shall return the grinder to normal operation. If three (3) reverses occur within a 30 second interval, the controller shall stop the grinder motor in a jam condition and activate the grinder FAIL indicator and relay.
2. When a power failure occurs while the grinder is operating, the grinder will resume operation once power is restored.
3. When a power failure occurs while the grinder is in a fail condition, once power is restored the fail indicator shall reactivate and remain until reset.
4. Reset of the grinder shall be accomplished from the controller only.

PART 3 EXECUTION

3.1 INSTALLATION

Grinder(s) and controller(s) shall be installed in accordance with supplier's installation instructions, and in accordance with all OSHA, local, state, and federal codes and regulations.

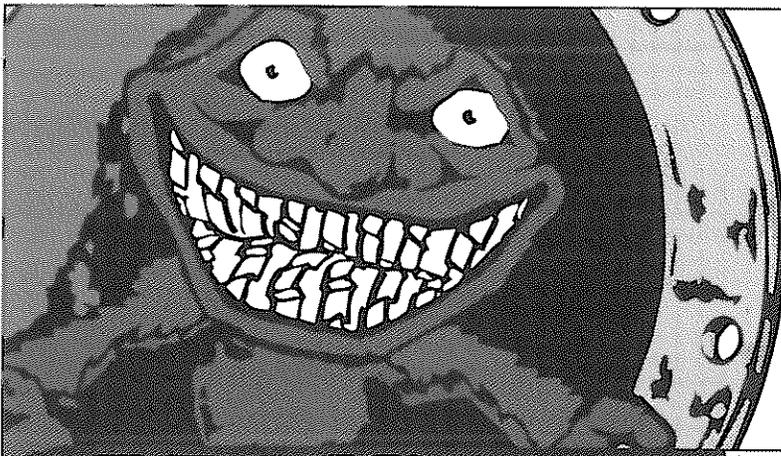
3.2 TESTING

Test of grinder(s) shall demonstrate correct alignment, smooth operation. Test period shall demonstrate simulated jam conditions for grinder.

3.3 TRAINING

A field training course shall be provided for operation and supervisory staff members. Field instruction shall cover items for successful operation contained in the operation & maintenance manuals.

END OF SECTION



Muffin Monster®

Family of Grinders

Mini Monster®

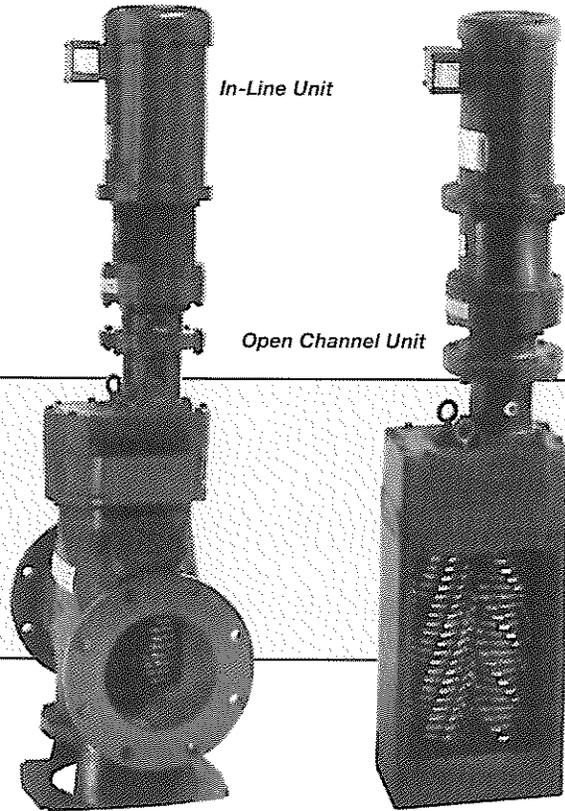
For lower flows, buildings, condos and resorts the Mini Monster is a powerful grinder in a compact package. It shreds rags and trash into tiny pieces in wastewater or sludge to protect pumps and eliminate costly breakdowns and back-ups.

Muffin Monster

The workhorse of wastewater since 1973 the Muffin Monster easily reduces troublesome solids. The dual-shaft design uses low speed, high-torque power to shred tough solids in sewage and sludge. With over 30,000 installations the Muffin Monster is the proven solution for protecting pumps and systems.

Macho Monster

For bigger solids reduction projects the Macho Monster has the power to keep up with the flow. The 40000 model uses 7-1/2" (190mm) cutters and the 70000 model uses massive 10" (254mm) cutters to slice through difficult solids. Ideal for sludge lines, prisons, waste-to-energy and food processing.



Features & Benefits

Dual Shafted Grinder

- Low-speed, high torque grinders handle rags, rocks, wood, clothing, plastics and other debris
- Capable of grinding a wider variety of solids than single shafted machines and macerators

Compact and Efficient Design

- Adapts to pipelines or channels with little or no modification
- Custom stainless steel frames allow easy installation in channels, wet wells and pump stations
- In-line Mini and Muffin Monster incorporate easy to remove cutter cartridge

Cartridge Seal Assembly

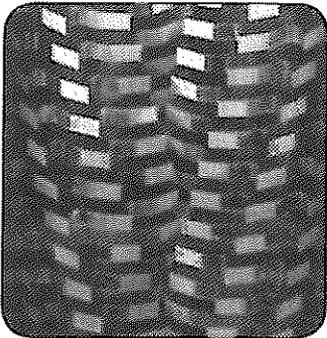
- High pressure capability up to 90 PSI (6 bar)
- Runs submerged or dry with no seal flush required

Patented High-Flow Side Rails

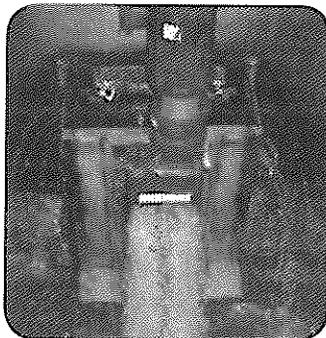
- Increases flow capacity and decreases head loss
- Deflects solids into the cutting chamber

Automated Monitoring and Controls

- Auto load sensing and reversals reduce interrupts and optimize the grinder's performance



Dual shafted grinder



Easy pump station installation with custom frames.



JWC
Environmental®

Trust Monster Quality™

www.jwce.com



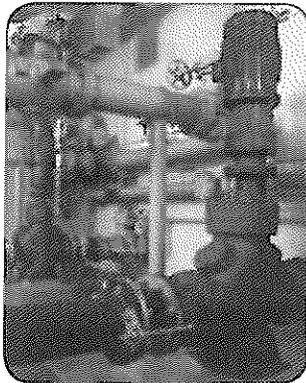


Applications

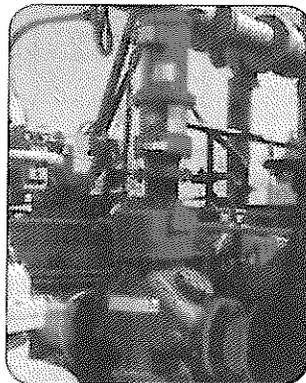
	Mini Monster	Muffin Monster	Macho Monster	Characteristics
Buildings, Resorts and Condos				Grinds up rags, cotton products and other trash frequently flushed down the toilet. Grinders are more powerful than grinder pumps and eliminate sewage pumping problems.
Pump Stations				Channel grinders can be installed on the wall of a wet well. In-line units are installed in dry pumping stations. Grinds solids to keep pumps running reliably and efficiently.
Septage / Grease				Grinds up rags, silverware, solids and trash as septage/grease are unloaded.
Sludge / Scum				Grinds up rag balls, rocks and plastics to protect sludge pumps.
Belt Press / Centrifuge				Grinds a variety of solids to protect dewatering systems from damage and makes them more efficient by homogenizing sludge prior to dewatering.
Jails / Prisons				Prevents clogs and spills. Installed in over 2,000 prisons, jails and institutional facilities.
Hospitals / Nursing Homes				Grinds up rags, pads, clothing, needles and dangerous waste to protect pumps & systems.
Food / Fish Processing				Grinds up material such as fish guts, slaughterhouse scraps, rendering material, food scraps and more. Frequently used in biogas applications to turn waste into energy.
Pulp / Paper				Installed in sludge lines, pulp systems and wastewater plants to protect pumps & pipelines.
Industrial				Used in refineries, hazardous waste processing, obsolete inventory destruction & recycling.

* Consult factory for additional application assistance and approval.

Photo Gallery



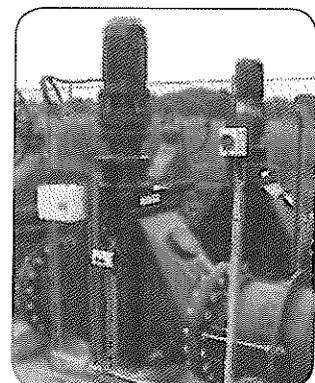
Muffin Monster in-line grinders handling septage.



Muffin Monster in-line sludge grinder.



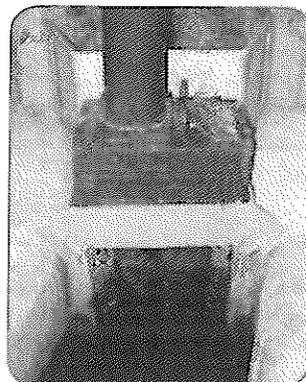
Macho Monster in-line sewage grinder in a jail.



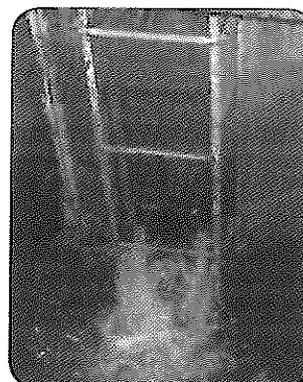
Macho Monster in-line sludge grinders.



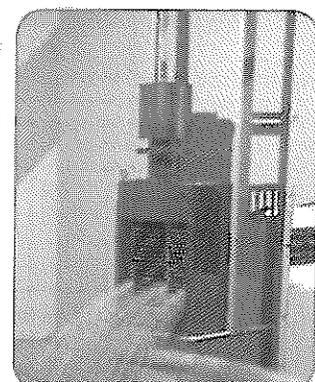
Muffin Monster grinder in a fish processing plant.



Muffin Monster channel grinder in a prison.



Muffin Monster pump station grinder and installation frame.



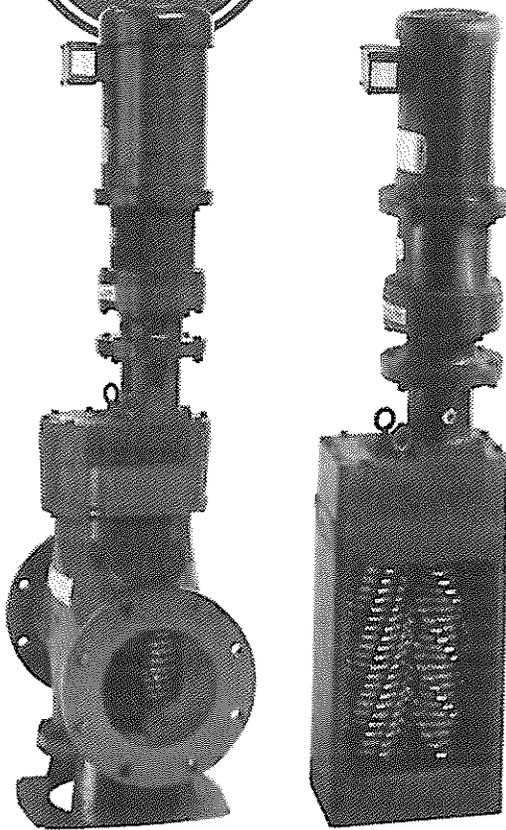
Muffin Monster pump station grinder and installation frame.



**Removable
Cutter
Cartridge**

Muffin Monster

Model 30000

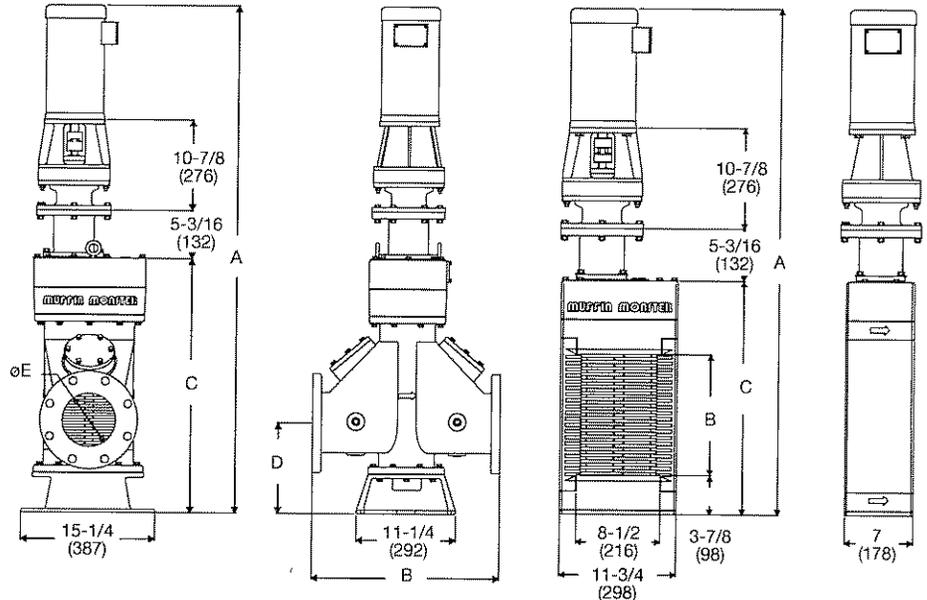


In-Line Unit

Open Channel Unit

Standard Specifications

Models	Motor HP (kW)	Hex Size in. (mm)	Reducer	Cutter Size in. (mm)	Max Force at Cutter Tip lbs. (kN)
30004T / 30005	3 (2.2)	2 (50)	29:1	4-3/4 (120)	6,150 (27.4)
30004T / 30005	5 (3.7)	2 (50)	29:1	4-3/4 (120)	9,150 (40.7)



In-Line Configuration

Open Channel Configuration

Performance Capability – Open Channel Configuration

Model	Flow Rate GPM (m ³ /h)	Head Drop inches (mm)	Approximate Net Weight lbs (kg)	Dimensions - inches (mm)		
				A	B	C
30005-0008	335 (76)	9-1/2 (241)	370 (168)	48 (1219)	8 (203)	19-1/2 (482)
30005-0012	490 (111)	13-1/2 (343)	410 (186)	52-1/8 (1320)	12 (305)	23-5/8 (584)
30005-0018	740 (168)	17-1/2 (444)	465 (211)	58 (1473)	18 (457)	29-1/2 (736)
30005-0024	1000 (227)	19-1/2 (495)	520 (236)	63-3/4 (1600)	24 (609)	35-1/4 (889)
30005-0032	1470 (334)	21-1/2 (546)	580 (263)	71-1/2 (1803)	32 (813)	43 (1092)
30005-0040	2000 (454)	23-1/2 (597)	650 (295)	79-1/2 (2006)	40 (1016)	51 (1295)

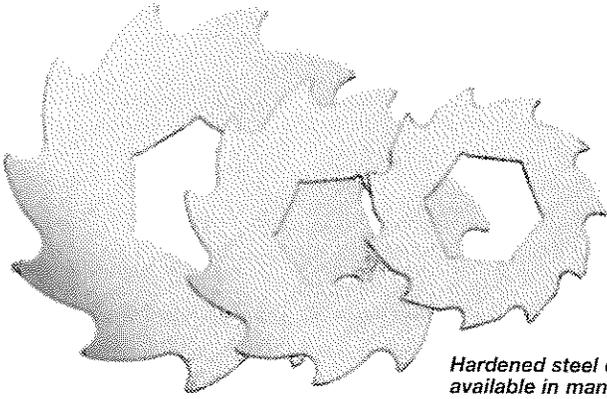
* Notes: Flow based on optimum channel conditions • Consult factory for final analysis of application • Dimensions based on 3 HP (2.2kW) electrical motor.

Performance Capability – In-Line Configuration

Model	Flow Rate GPM (m ³ /h)	Pipeline Size inches (mm)	Pressure Drop PSI (bars)	Max Pressure PSI (bars)	Approx. Net Weight lbs (kg)	Dimensions - inches (mm)				
						A	B	C	D	E
30004T-1204	400 (91)	4 (102)	0.42 (0.03)	90 (6)	550 (250)	56-1/4 (1423)	19-1/4 (483)	28-1/4 (711)	8-1/8 (206)	4 (102)
30004T-1206	600 (136)	6 (152)	0.86 (0.06)	90 (6)	560 (254)	56-1/4 (1423)	21-1/4 (534)	28-1/4 (711)	9-1/8 (232)	6 (152)
30004T-1208	800 (182)	8 (203)	1.60 (0.11)	90 (6)	570 (258)	56-1/4 (1423)	23-1/4 (584)	28-1/4 (711)	10 (254)	8 (203)
30004T-2410	1000 (227)	10 (254)	1.22 (0.08)	90 (6)	785 (356)	67-3/4 (1727)	27-1/4 (686)	39-3/4 (1010)	11-1/2 (283)	10 (254)
30004T-2412	1200 (273)	12 (305)	1.59 (0.11)	90 (6)	810 (367)	67-3/4 (1727)	31-1/4 (787)	39-3/4 (1010)	12 (305)	12 (305)

* Notes: In-Line unit typically installed prior to suction side of pump.

Muffin Monster Options



Hardened steel cutters available in many sizes

Cutters

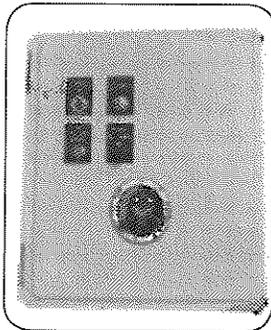
- 7, 11 and 13 tooth variations
- Special: 3-tooth fish grinding cutters
- Optional: extra-hard carburized cutters; stainless steel

Custom Frames

- Stainless steel guide frames attach to pump station or channel walls to make installation easier
- Frame is customized to fit each site and includes: guide rails; grinder support base; subchannel; overflow bar racks and more

High-tech Controllers

- Model PC2200 standard
- Standard enclosure: NEMA-4x fiberglass, 3 position switch and indicators
- Optional enclosures: NEMA-4x 304 stainless steel; NEMA-4x 316 stainless; NEMA-7 explosion proof



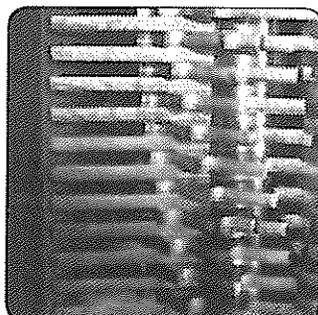
High-tech Controllers

Scrapers

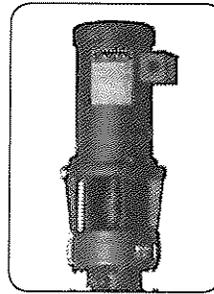
- Integrated steel scrapers increase throughput and help cutters clean-out faster. Improves performance of hopper fed applications.



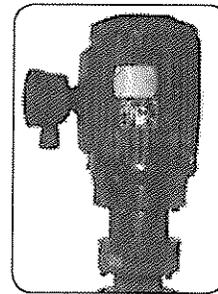
Custom stainless steel frames



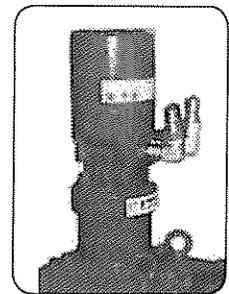
Scrapers (optional)



Electric motor



Exclusive: JWC designed immersible motor (NEMA-6P)



Hydraulic drive

Motors

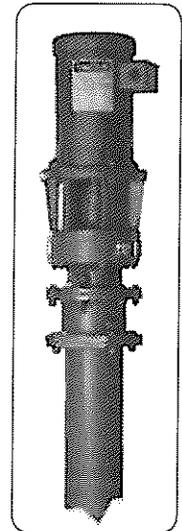
- TEFC - Totally enclosed fan cooled electric
- XPFC - Explosion proof fan cooled electric
- XPNV - Exclusive electric immersible
- Available in: 3, 5, 10 HP (2.2, 3.7, 7.5 kW)

Hydraulic Power Packs

- Available in 5, 10, 15 HP (3.7, 7.5, 11 kW)

Extended Motor Shaft

- Places motor above highest water level. Available in 6" (150mm) increments. Maximum: 12' (3600mm)

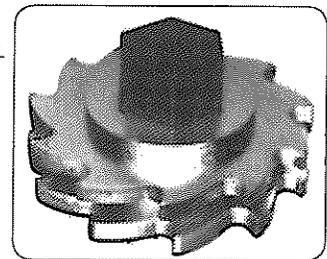


Extended motor shaft

Service Options

JWC offers several programs to choose from

- 1. MonsterCare:** Affordable service contract provides peace-of-mind and covers most grinder repairs.
- 2. Monster Exchange:** First we send a newly re-conditioned grinder; next, swap the new and old grinders and finally ship the old one back. Free labor with 1 year limited warranty.
- 3. Factory Repair:** We rebuild your grinder good as new. Free labor, 1 year limited warranty.
- 4. Parts:** Genuine Monster cutters, shafts and seals make a big difference.
- 5. Upgrade:** move up to the next generation of Monster grinding technology.



Genuine Monster parts

Headquarters
290 Paularino Ave.
Costa Mesa, CA 92626 USA
Toll Free: (800) 331-2277
Phone: (949) 833-3888
Fax: (949) 833-8858
jwce@jwce.com

Western Product Support
2600 S. Garnsey St.
Santa Ana, CA 92707, USA
Toll Free: (800) 331-2277
Phone: (949) 833-3888
Fax: (714) 751-1913
jwce@jwce.com

Eastern Product Support
4485 Commerce Dr, Ste 109
Buford, GA 30518, USA
Toll Free: (800) 331-8783
Phone: (770) 271-2106
Fax: (770) 925-9406
jwce@jwce.com



www.jwce.com



JWC
Environmental®

2600 S. Garnsey Street
Santa Ana, CA 92707
Tel | 714.428.4749
Fax | 714.549.4007
markw@jwce.com

MANUFACTURER'S STANDARD WARRANTY

LIMITED WARRANTY

Subject to the terms and conditions hereof, JWC Environmental (the "Company") warrants until one year after commissioning (written start-up date notification required) of the Product or until or until 18 months after delivery of such Product to Buyer, whichever is earlier, that each Product will be free of defects in materials and workmanship. If the Company receives written notification of such defect during the warranty period and the defective Product's use is discontinued promptly after the defect is discovered by the person who then owns the defective Product (the "Owner"), the Company will cause any Products whose defect is covered under this warranty to either be replaced or repaired at no cost to the Owner. The foregoing warranty does not cover repairs required due to repair or alteration other than by the Company's personnel, accident, neglect, misuse, wear whether ordinary or extraordinary, transportation or causes other than ordinary use and maintenance in accordance with the Company's instructions and specifications. Any replaced Products will become the property of the Company. Any replacement Products will be warranted only for the remaining term of the original limited warranty period and not beyond that term.

DISCLAIMER OF WARRANTIES AND LIMITATIONS ON LIABILITY

The foregoing limited warranty is the exclusive and only warranty with respect to the Products and shall be in lieu of all other warranties (other than the warranty of title), express, statutory or implied. The obligations of the Company under the foregoing warranty shall be fully satisfied by repair or replacement of the defective Product or part, as provided above. In no event shall the Company be liable for lost profits or other special, indirect or consequential damages, resulting from any breach of warranty of the Company or Buyer's ordering, using, owning or disposing of the Products covered hereby, even if the Company has been advised of the possibility of such damages. The total liability of the Company to Buyer and others arising from any cause whatsoever in connection with the Buyer's purchase, use and disposition of any Product covered hereby shall under no circumstances, exceed the purchase price paid for the Product by Buyer. No action, regardless of form, arising out of this agreement or based upon Buyer's purchase, use or disposition of the Products may be brought by either party more than one year after the cause of action accrues, except that any cause of action for the nonpayment of the purchase price may be brought at any time. Unless specifically agreed to in writing by the Company, no charges may be made to the Company by Buyer or any third party employed by Buyer for removing, installing, or modifying any Product.

Argonaut Insurance Company
Deliveries Only: 225 W. Washington, 24th Floor
Chicago, IL 60606

United States Postal Service: P.O. Box 469011, San Antonio, TX 78246

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS: That the Argonaut Insurance Company, a Corporation duly organized and existing under the laws of the State of Illinois and having its principal office in the County of Cook, Illinois does hereby nominate, constitute and appoint:

Steven R. Foster, Marie Perryman

Their true and lawful agent(s) and attorney(s)-in-fact, each in their separate capacity if more than one is named above, to make, execute, seal and deliver for and on its behalf as surety, and as its act and deed any and all bonds, contracts, agreements of indemnity and other undertakings in suretyship provided, however, that the penal sum of any one such instrument executed hereunder shall not exceed the sum of:

\$35,000,000.00

This Power of Attorney is granted and is signed and sealed under and by the authority of the following Resolution adopted by the Board of Directors of Argonaut Insurance Company:

"RESOLVED, That the President, Senior Vice President, Vice President, Assistant Vice President, Secretary, Treasurer and each of them hereby is authorized to execute powers of attorney, and such authority can be executed by use of facsimile signature, which may be attested or acknowledged by any officer or attorney, of the Company, qualifying the attorney or attorneys named in the given power of attorney, to execute in behalf of, and acknowledge as the act and deed of the Argonaut Insurance Company, all bond undertakings and contracts of suretyship, and to affix the corporate seal thereto."

IN WITNESS WHEREOF, Argonaut Insurance Company has caused its official seal to be hereunto affixed and these presents to be signed by its duly authorized officer on the 18th day of July, 2013.

Argonaut Insurance Company

by: 

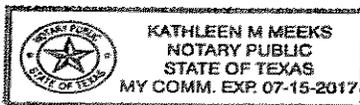
Joshua C. Betz, Senior Vice President

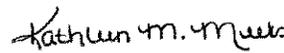
STATE OF TEXAS

COUNTY OF HARRIS SS:

On this 18th day of July, 2013 A.D., before me, a Notary Public of the State of Texas, in and for the County of Harris, duly commissioned and qualified, came THE ABOVE OFFICER OF THE COMPANY, to me personally known to be the individual and officer described in, and who executed the preceding instrument, and he acknowledged the execution of same, and being by me duly sworn, deposed and said that he is the officer of the said Company aforesaid, and that the seal affixed to the preceding instrument is the Corporate Seal of said Company, and the said Corporate Seal and his signature as officer were duly affixed and subscribed to the said instrument by the authority and direction of the said corporation, and that Resolution adopted by the Board of Directors of said Company, referred to in the preceding instrument is now in force.

IN TESTIMONY WHEREOF, I have hereunto set my hand, and affixed my Official Seal at the County of Harris, the day and year first above written.





(Notary Public)

I, the undersigned Officer of the Argonaut Insurance Company, Illinois Corporation, do hereby certify that the original POWER OF ATTORNEY of which the foregoing is a full, true and correct copy is still in full force and effect and has not been revoked.

IN WITNESS WHEREOF, I have hereunto set my hand, and affixed the Seal of said Company, on the 25th day of March, 2014



Sarah Heineman, VP-Underwriting Surety