



# City of Milton

P.O. Box 909, MILTON, FL 32572

Phone: (850) 983-5438 ∞ Fax: (850) 983-5415

## MEMORANDUM

TO: Interested Parties  
FROM: Diane Ebentheuer, Purchasing Officer  
RE: ITB 2022.04 8-Inch Bypass Pump for Sundial Utilities  
DATE: 01/22/2022

Notice is hereby given that the City of Milton will receive sealed bids for ITB 2022.04 8-Inch Bypass Pump for Sundial Utilities. The documents contain the necessary information for preparing and submitting your bid for this effort.

Information is available on the City's web page at <https://MiltonFL.org/322/Purchasing>. There you may also register thru [VendorRegistry.com](http://VendorRegistry.com) (there is no charge to join); and/or thru [BidNetDirect.com/florida/city-of-milton](http://BidNetDirect.com/florida/city-of-milton) (there is no charge to join.)

All must review the Scope of Services and Project Description as described in this document to ensure their ability to perform as indicated.

The deadline for submitting your sealed bid is:

**Wednesday, February 23, 2022 at 2:00 p.m., (CST)**

**Delivered: City of Milton, 6738 Dixon Street, Milton, Florida, 32570**

**Mailed: City of Milton, P.O. Box 909, Milton, FL 32572**

Questions should be submitted in writing and directed to the Purchasing Department at (850) 983-5438; or by e-mail to [DEbentheuer@miltonFL.org](mailto:DEbentheuer@miltonFL.org) by Monday, February 14, 2022 at 2:00 p.m. Answers will be posted by Wednesday, February 16, 2022 at 2:00 p.m. (CST)

Interpretations, clarification of specifications, and requirement or changes to the documents which have a material effect will be documented and communicated only by written addendum posted on the City web page, Bid Net Direct, and Vendor Registry. All are responsible for checking for any addendums that may be issued, and to obtain such addendums.

*Diane Ebentheuer*

Diane Ebentheuer, Purchasing Officer

## INSTRUCTIONS

### ITB 2022.04 8-Inch Bypass Pump for Sundial Utilities

#### I. Deadlines/Dates:

- Invitation to Bid Published: January 22, 2022
- Questions Deadline: Monday, Feb 14, 2022 @ 2:00 p.m. (CST)
- Answers Posted by: Wednesday, Feb 16, 2022 @ 2:00 p.m. (CST)
- Bids Due: **Wednesday, Feb 23, 2022 @ 2:00 p.m. (CST)**

#### II. Contact Information:

Contact: Diane Ebentheuer, Purchasing Officer  
Phone: (850) 983-5438  
Email: [DEbentheuer@miltonFL.org](mailto:DEbentheuer@miltonFL.org)

#### III. Bids Must be Complete and Include:

1. Bidder's/Proposer's Declaration (page 3-5)
2. Bid Form (page 6)
3. Public Entity Crime Form F.S. 287.133(3)(A) (*City Website*)
4. Drug-Free Workplace Form F.S. 287.087 (*City Website*)
5. Non-Collusion Affidavit (*City Website*)
6. Conflict of Interest Disclosure Form (*City Website*)
7. E-Verify Statement of Compliance (*City Website*)

*City Website address:* <https://MiltonFL.org/322/Purchasing>

IV. **Copies:** Please provide one (1) original, and four (4) copies of your bid.

V. **Faxed or emailed submittals are not accepted.**

**Sealed bids can be mailed to:**

City of Milton  
Purchasing Department  
P. O. Box 909  
Milton, FL 32572

**or delivered to:**

City of Milton  
Purchasing Department  
6738 Dixon Street  
Milton, FL 32570

Submittals must be sealed and marked:

To: CITY OF MILTON

**VENDOR Name:** \_\_\_\_\_

**SEALED BID \* DO NOT OPEN**

**Sealed ITB#: 2022-04**

**ITB Title: 8-Inch Bypass Pump for Sundial Utilities**

**DUE DATE/TIME: February 23, 2022 / 2:00 p.m. CST**



**BIDDER'S/PROPOSER'S DECLARATION**  
**ITB 2022.04 8-Inch Bypass Pump for Sundial Utilities**

The bidder/proposer understands, agrees, and warrants:

1. These items apply to and become a part of the terms and conditions of the bid/proposal submitted. Any exceptions must be in writing.
2. All bids submitted shall be subject to acceptance or rejection. The City of Milton specifically reserves the right to accept or reject any or all bids, to waive any technicalities and formalities in the bid process, and to award the bid in part or in any manner deemed to be in the best interest of the City.
3. All proposals submitted shall be subject to acceptance or rejection. The City of Milton specifically reserves the right to accept or reject any or all proposals, to waive any technicalities and formalities in the proposal process, and to award the proposal in part or in any manner deemed to be in the best interest of the City.
4. The City of Milton is exempt from sales tax.
5. Contractors are responsible for any sales tax on purchases for the project.
6. The City of Milton will receive sealed bids/proposals from interested parties at its offices located at City Hall, Milton, Florida. Any submittal received after the deadline will **not** be considered.
7. Bids/proposals will be publicly opened and read at the City of Milton, City Hall on the day and at the hour specified.
8. The City of Milton may consider as non-responsive, any bid/proposal in which there is an alteration of, or departure from the bid/proposal form hereto attached.
9. The bid/proposal will be awarded to the lowest most responsive reliable firm complying with the conditions of the bid/proposal. The firm to whom award is made will be notified as soon as possible. The City of Milton reserves the right to reject the bid/proposal of a firm who has previously failed to perform properly or complete on time, contracts of a similar nature, or the bid/proposals of a firm who, in the sole opinion and discretion of the City of Milton is not in a position to perform the contract, or whose name appears on the United States Comptroller General's list of ineligible contractors.
10. The City of Milton reserves the right to award to multiple vendors.
11. Interested Parties shall submit all required forms and information simultaneously with their sealed bid/proposal. Forms and information become a part of the property of the City of Milton and will not be returned to the firm unless a written request to withdraw is received prior to opening of bids/proposals.
12. For Bids-Additional Quantities: For a period not exceeding twelve (12) months from the day of the solicitation opening, the right is reserved to purchase any number of additional items at the prices offered in this solicitation. If additional quantities are not acceptable, the bid form shall be noted "offer is for specified quantity only."
13. **For Bids/NOTE:** Unless stated on the bid form, the bid submitted will assume all specifications will be met. Please note all exceptions on the bid form.
14. The successful bidder/proposer will be required to submit additional forms, which are available on the City's website at <https://MiltonFL.org/322/Purchasing> at the bottom of the page.
  - Certificate of Non-Discrimination
  - W-9 Taxpayer Identification Number



- Vendor Application
  - Certificates for Liability, Vehicle, and Worker's Comp Insurance.  
(City is to be named as additional insured.) Limitations are listed online.
  - Prompt Payment Affidavit
15. That they have carefully read and fully understand the full scope of the specifications.
  16. That they have the capability to successfully undertake and complete the responsibilities and obligations in said specifications.
  17. All bidders/proposers are responsible for checking for any addendums that may be issued. Addendums are posted on the City web page, Bid Net Direct, and Vendor Registry.
  18. If required- That they have Liability Insurance, and/or Vehicle and Workers Comp Insurance. (A declaration of insurance form must be provided before any work will begin.)
  19. (Service Contracts Only) Pursuant to Florida Statute 119, the contractor must follow all public records law. **IF THE CONTRACTOR HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES, TO THE CONTRACTOR'S DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THIS CONTRACT, CONTACT THE CUSTODIAN OF PUBLIC RECORDS AT (850)983-5402, [DNobles@MiltonFL.org](mailto:DNobles@MiltonFL.org) OR P.O. BOX 909, MILTON, FL 32572.** A contractor who fails to provide the public records to the City within a reasonable time may also be subject to penalties under Florida Statute 119.10.
  20. Sealed bids or proposals >\$250,000 have special requirements for procurement and must comply with the below:
    - a. **Compliance Supplement - President's executive Order Numbers 11246 and 11375** which prohibit discrimination in employment regarding race, creed, color, sex, or national origin. (2 CFR 200 Appendix XI [whitehouse.gov](http://whitehouse.gov))
      - Inclusion of goals for minority participation in construction are 6.9% for women.
      - % for minorities as prescribed by appendix B-80, Federal Register, volume 45, No. 194, October 3, 1980.
    - b. **Title VI of the Civil Rights Act of 1964** (Department of Labor [dol.gov](http://dol.gov))
    - c. **Title 45 CFR Required Items ([govinfo.gov](http://govinfo.gov)):**
      - **Anti-Kickback Act** (title 45 CFR 2543.82)
      - **Davis Bacon Act** (title 45 CFR 2543.83)
      - **Contract Work Hours and Safety Standards Act** (title 45 CFR 2543.84)
      - **Byrd Anti-Lobbying Amendment** (45 CFR 2543.87)
  21. Federal Award Contracts - Selected Contractor must comply with:
    - **Termination for Cause and Convenience** - All contracts or purchase orders in excess of \$10,000 must address by the non-Federal entity including the manner by which it will be affected and the basis for settlement, (Appendix II Part 200 of 2 CFR 200 (B) [gov.info](http://gov.info))
    - **Contract Clauses for Contract Provisions for Non-Federal Entity Contracts Under Federal Awards** (2 CFR 200 Uniform Guidance Appendix II [gov.info](http://gov.info))
  22. **For all Contracts - Contractors should take all necessary affirmative steps to assure that minority businesses, women's business enterprises, and labor surplus area firms are used when possible.** (Appendix II Part 200 of 2 CFR 200 (B) [gov.info](http://gov.info))



- 23. That this bid/proposal may be withdrawn by requesting such withdrawal in writing at any time prior to opening date, but may not be withdrawn after such date and time.
- 24. That by submission of this bid/proposal the firm acknowledges that the City of Milton has the right to make any inquiry or investigation it deems appropriate to substantiate or supplement information supplied by the firm.
- 25. If a partnership, a general partner must sign. If a corporation, the authorized corporate officer(s) must sign, and the corporate seal must be affixed to this bid/proposal.
- 26. Recommendations are posted on city web page via agendas prior to award.
- 27. Any protests are handled per the City's Purchasing Policy and F.S. 120.57(3).

**BIDDER:** \_\_\_\_\_

Company Name

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Address/City/Zip

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Phone	Email
_____	_____
Contact Name	Title
_____	_____
Company Representative <u>Signature</u>	Date
_____	_____

**BID FORM**  
**ITB 2022.04 8-Inch Bypass Pump for Sundial Utilities**

**Bid Amount \$** \_\_\_\_\_

**Acknowledgement of Addendums:** \_\_\_\_\_ *(list numbers or N/A)*

Additional Quantities: For a period not exceeding twelve (12) months from the day of the solicitation opening, the right is reserved to purchase any number of additional items at the prices offered in this solicitation. If additional quantities are not acceptable, the bid form shall be noted "offer is for specified quantity only."

**Additional Costs, Special Exceptions, Notes or Comments:**

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**Prices are valid for 90 days from time of opening.**

**The undersigned agrees to the above terms and conditions.**

**BIDDER:** \_\_\_\_\_

Company Name

\_\_\_\_\_

Address/City/Zip

Phone \_\_\_\_\_

Email \_\_\_\_\_

Contact Name \_\_\_\_\_

Title \_\_\_\_\_

Company Representative Signature \_\_\_\_\_

Date \_\_\_\_\_



**PURPOSE, SCOPE OF WORK, AND QUALIFICATIONS**  
**ITB 2022.04 8-Inch Bypass Pump for Sundial Utilities**

**A. GENERAL INFORMATION:**

The City of Milton is seeking to purchase an 8 Inch Bypass Pump for Sundial Utilities.

**B. PROJECT SCOPE (see attached)**

**C. DELIVERY TIME: 120 days from award.**

**D. INSURANCE REQUIREMENTS:**

Contractor shall obtain and maintain the minimum insurance coverage set forth below. By requiring such minimum insurance, the City of Milton shall not be deemed or construed to have assessed the risk that may be applicable to the Contractor. Contractor shall assess its own risks and if it deems appropriate and/or prudent, maintain higher limits and/or broader coverage. Contractor is not relieved of any liability or other obligations assumed or pursuant to the Contract by reason of its failure to obtain or maintain insurance in sufficient amounts, duration, or types.

Contractor shall carry the following limits of liability as required below: Dollar amounts may change in accordance with the event or project. Events may include Food and liquor liability.

**1. Commercial General Liability - ISO CG 001 Form or equivalent.**

General Aggregate	\$1,000,000
Products/Completed Operations Aggregate	\$1,000,000
Each Occurrence Limit	\$1,000,000
Personal/advertising Injury	\$1,000,000
Fire Damage (Any One Fire)	\$50,000
Medical Payments (Any One Person)	\$5,000

**2. Automobile Liability**

Bodily Injury/Property Damage	\$1,000,000 each accident
Personal Injury Protection (PIP)	Statutory

**3. Workers' Compensation**

Coverage A (Workers' Compensation)	Statutory
Coverage B (Employers Liability):	
➤ Each Accident	\$100,000
➤ Disease-Each Employee	\$500,000
➤ Disease-Policy Limit	\$100,000

**E. FORCE MAJEURE:**

Neither party shall be liable for loss or damage suffered as a result of any delay or failure in performance under this Contract or interruption of performance resulting directly or indirectly from acts of God, civil, or military authority, acts of public enemy, war, riots, civil disturbances,

insurrections, accidents, fire, explosions, earthquakes, floods, water, wind, lightning, strikes, labor disputes, shortages of suitable parts, materials, labor, or transportation to the extent such events are beyond the reasonable control of the party claiming excuse from liability resulting there from.

**F. MODIFICATIONS:**

Modifications to provisions of this contract shall only be valid when they have been rendered in writing and duly signed by both parties. The Parties agree to negotiate this contract if stated revisions of any applicable laws, regulations or increases/decreases in allocations make changes this this contract necessary.

**G. TERMINATION:**

This contract may be terminated by either party upon no less than thirty (30) calendar days' notice, without cause, unless a lesser time is mutually agreed upon by both parties. Said notice shall be delivered by certified mail (return receipt requested), by other method of delivery whereby an original signature is obtained, or in-person with proof of delivery. In the event of termination, the vendor will be paid for all costs incurred and hours worked up to the time of termination.



PROJECT SCOPE

**1 Part One- GENERAL:**

**1.1 PROJECT SCOPE:**

- 1.1.1 Requirements for providing an automatically starting station back-up pump.
- 1.1.2 The pump shall be delivered to the owner within **120 days** of contract commencement or as stated in the notice to proceed.

**1.2 GENERAL:**

- 1.2.1 The specifications herein state the minimum requirements of the City. All bids must be regular in every respect. Unauthorized conditions, limitations, or provisions shall be cause for rejection. The City may consider as “irregular” or “non-responsive”, any bid not prepared and submitted in accordance with the bid documents and specification, or any bid lacking sufficient technical literature to enable the City to make a reasonable determination of compliance to the specification. It shall be the bidder’s responsibility to carefully examine each item of the specification, failure to offer a completed bid or failure to respond to each section fo the technical specification (exception yes or no) will cause the proposal to be rejected without review as “non-responsive.” All variances, exceptions, and/or deviations shall be fully described in the appropriate section; deceit in responding to the specification will be cause for rejection.
- 1.2.2 Equivalent Product: Bids will be accepted for consideration on any make and model that is equal to or superior to the specified Godwin Dri-Prime CD 225M eight-inch (8”) trailer-mounted pump and sound attenuated enclosure or equal, as interpreted by the City. A blanket statement that equipment proposed will meet all requirements will not be sufficient to establish equivalence, but will require an explanation at each deviation or substitution.
- 1.2.3 Interpretations: In order to be fair to all bidders, no oral interpretations will be given to any bidder as to the meaning of the specifications documents or any part thereof. Every request for each consideration shall be made in writing to the City. Based upon such inquiry, the City may choose to issue an Addendum in accordance with Local Public Contract Laws.
- 1.2.4 General specifications: Units described shall be new, unused and of the current year’s production. Unit shall be of the latest design and in current production, completely serviced, ready for work, and shall include all standard and optional equipment as specified herein. The model specified shall have been in continuous use by municipal and industrial owners for a minimum of five years. A list of five user contacts shall be provided with the bid submittal. Failure to supply a verifiable list of users will be cause for rejection of the bid.

PROJECT SCOPE

- 1.2.5 Bidders must have a fully stocked parts and service facility within **50 miles of the City**. The City shall have the right to inspect the office and shall be the sole judge of its adequacy to fulfill this requirement.
- 1.2.6 Bidders, at the request of the City, must be prepared to review their specifications with the City and must, if requested, also be prepared to provide a unit for the convenience of the City. These services, if needed are considered as part of the bidder's proposal and will be provided without cost or obligation to the City.

**1.3 System Description**

- 1.3.1 The pump specified in this section will be used to pump sewer.
- 1.3.2 The pump and accessories shall be supplied by the pump manufacturer.
- 1.3.3 The pump shall be fitted with a fully automatic priming system incorporating an air compressor, air ejector assembly, and/or water separation tank. The priming system shall be capable of priming the pump from a completely dry pump casing. The air ejector shall operate on the discharge side of the compressor, eliminating the possibility of water being drawn into the air source. The pump must be capable of running totally dry for periods up to 24 hours, then automatically re-priming and returning to normal pumping volumes without need for any adjustment.
- 1.3.4 The priming system shall not use a vacuum or diaphragm pump, nor require the use of a "Foot" type valve. It shall contain no moving parts or protective float gear. Priming systems that require manual water additions to facilitate pump priming are not acceptable. The pump's ability to repeatedly cycle from dry suction/pump/ snore/ repriming /pump shall be required. This will necessitate the draining of all residual water from the pump case to initiate a dry suction starting condition.
- 1.3.5 The diesel engine driven pump unit shall be mounted with tires that can be towed on the road at 50 m.p.h. and shall be wired for over the road usage, per applicable D.O.T. Standards.
- 1.3.6 The engine and pump shall be completely enclosed with 14 gauge sheet metal panels backed with 1" and 2" layers of polydamp acoustical sound deadening material. The acoustical enclosure shall reduce pump and engine noise to sixty-eight dBA or less at a distance of 30 feet. The panels shall be removable for easy access to the engine/pump for maintenance and repair. The engine control panel shall have a locking door for visual inspection. For maintenance and service needs, the pump discharge side of the trailer shall have a hinged door for quick access to the engine oil fill, fuel fill port, oil dipstick and filters.



# ITB 2022.04 Eight Inch Bypass Pump for Sundial Utilities

## PROJECT SCOPE

- 1.3.7 Pump and priming system shall be fully automatic, needing no form of adjustment or manual addition of water for the priming system. The pump shall be capable of static suction lifts to 28 vertical feet, at sea level. It shall also be capable of operation using extended suction lines.
- 1.3.8 Equipment acceptance shall be contingent upon the pump's ability to run continuously at full speed in a completely dry condition for periods up to 24 hours. This may require the draining of all residual water in the pump casing to simulate a dry suction/case condition. The engineer may require a demonstration.
- 1.3.9 The pump offered shall be the manufacturer's standard production model. It shall have been in continuous use by municipal and industrial owners for a minimum of five years. A list of five user contact including contact names and telephone numbers shall be provided with the bid submittal. Failure to supply a verifiable users list will be cause for rejection of the bid.

### 1.4 Design Requirements

1.4.1	Operating Speed (Maximum)	2200 RPM;
	Maximum Solids handling Size	3.125 Inches
	Impeller Diameter	290 MM
	Suction Size	8 Inches
	Discharge Size	8 inches
	Maximum Suction Lift	28 feet
	Maximum Duty Point	2100 GPM at 10' TDH

(Including a 20' suction lift)

### 1.5 References

- 1.5.1 ANSI B16.1 – Standard for Cast Iron Pipe Flanges and Flanged Fittings.

## 2 Part Two- Products

### 2.1 Acceptable Manufacturers

- 2.1.1 The pump shall be a Model CD225M, size 8" x 8" as manufactured by GODWIN PUMPS, Bridgeport, New Jersey. Or Equivalent.

### 2.2 Equipment

- 2.2.1 Casing, Suction Cover, Separation Tank: Pump castings shall be cast iron. Pump design shall incorporate a direct suction flow path that is in axial alignment with the impeller eye. There shall be no turns, chambers or valves between the suction flange and impeller eye.

## ITB 2022.04 Eight Inch Bypass Pump for Sundial Utilities

### PROJECT SCOPE

- 2.2.2 Impellers: The pump impeller shall be an open, three-bladed, non-clog type with pump-out vanes on the back shroud and fabricated from cast steel construction (minimum Brinell Hardness 200HB).
- 2.2.3 Wearplates: Shall be fully adjustable and replaceable, fabricated of cast iron. Wearplate clearances shall have no relationship to the ability of the pump to achieve a prime.
- 2.2.4 Bearings and Shafts: Pump shall be fitted with a bearing bracket to contain the shaft and bearings. Bearings shall be tapered roller bearings of adequate size to withstand imposed loads for sustained pumping at maximum duty points. Minimum ISO L10 bearing life to be 100,000 hours. Impeller shafts shall be fabricated of 1.5% chromium alloy.
- 2.2.5 Seals: Seals shall be high pressure, mechanical self-adjusting type with silicon carbide faces capable of withstanding suction pressures to 100psi. The mechanical seal shall be cooled and lubricated in an oil bath reservoir, requiring no maintenance or adjustment. Pump shall be capable of running dry, with no damage for periods up to 24 hours. All metal parts shall be of stainless steel. Elastomers shall be Viton.
- 2.2.6 Pump Suction and Discharge Flanges: Shall be cast iron ANSI (B16.1) Class 150 raised faced.
- 2.2.7 Pump Gaskets: Shall be compressed fiber and/or Teflon.
- 2.2.8 Pump O-Rings: Shall be Viton.
- 2.2.9 Priming System: Pump shall be fitted with a fully automatic priming system incorporating a twin-cylinder compressor and air ejector assembly, no vacuum pump. The compressor shall be installed on the engine auxiliary drive and shall be gear driven, lubricated and cooled from the engine. The priming system shall require no fail-safe protection float gear or any adjusting at high or low suction lifts. Pumps with self-priming chambers modified with vacuum priming systems shall not be accepted as equal.
- 2.2.10 Check Valve: Pump shall be supplied with an integral swing type check valve mounted on the discharge of the pump allowing unrestricted flow from the impeller. The check valve shall prevent in-line return of flow when the pump is shut off. Non-return valve elastomers shall be nitrile rubber and shall be field replaceable.
- 2.2.11 Drive Unit: The drive unit shall be a diesel water-cooled engine. The engine shall drive the pump by use of direct connected intermediate drive plate. Starter shall be 12 volt electric. Safety shut down switches for low oil pressure and high temperature shall be integral to the engine control panel. Battery shall have 180 amp hour rating. The engine control panel shall include a tachometer and an hour meter. Drive unit shall be a John Deere 4045HFC04 or equal, rated at 99 HP (continuous) at 2200 RPM. The engine will meet Final Tier 4 emissions standards. A certified continuous duty engine curve shall be supplied to the owner/engineer.



## ITB 2022.04 Eight Inch Bypass Pump for Sundial Utilities

### PROJECT SCOPE

- 2.2.12 Engine Control Panel: Engine speed shall be adjustable to operate the pump between maximum and minimum design operation speeds in manual mode.
- 2.2.13 Fuel Source: Fuel tank capacity shall be sufficient to provide at least 24 hours of operating time at full load. The engine shall be capable of operating satisfactorily on a commercial grade of distilled No. 2 fuel oil.
- 2.2.14 Exhaust: Exhaust system shall include a critical grade muffler of suitable size. Exhaust system shall have muffler and exhaust tubing sized to match maximum engine exhaust flow without exceeding engine manufacture's maximum allowable back pressure values.
- 2.2.15 Factory Painting: Pump, engine, base, and trailer shall be shop primed and finish painted at the place of manufacturer. Materials and thickness for priming shall be in accordance with manufacturer's standards.
- 2.2.16 Sound Attenuated Enclosure: The engine and pump shall be completely enclosed with 14-gauge sheet metal panels backed with 1" and 2" layers of polydamp acoustical sound deadening material. The acoustical enclosure shall reduce pump and engine noise to sixty-eight dBA or less at a distance of 30 feet. The panels shall be removable for easy access to the engine/pump for maintenance and repair. The engine control panel shall have a locking door for visual inspection. For maintenance and service needs, the pump discharge side of the trailer shall have a hinged door for quick access to the engine oil fill, fuel fill port, oil dipstick and filters.
- 2.2.17 UL Listed Skid Base:
  - 2.2.17.1 *The pump base tank shall be a UL-142 approved double wall design constructed in accordance with Flammable and Combustible Liquids Code, NFPA 30; The Standard for installation and use of Stationary Combustible Engine and Gas Turbines, NFPA 37; and The Standard for Emergency and Standby Power Systems, NFPA 110.*
  - 2.2.17.2 *The tank design shall be a Closed Top Dike Pump Base Tank. It shall be of double wall construction having a primary tank to contain the diesel fuel, held within another tank or dike, which is intended to collect and contain any accidental leakage from the primary fuel tank. The completed base tank assembly is to incorporate pump mounting locations and must be able to support four times the rated load.*
  - 2.2.17.3 *The primary tank shall be designed to withstand normal and emergency internal pressures and external loads. It shall be capable of withstanding internal air pressures of 3 to 5 psig without showing signs of excessive or permanent distortion and 25 psig hydrostatic pressure without evidence of rupture or leakage.*

## PROJECT SCOPE

- 2.2.17.4 *The primary and secondary tanks or dike shall have venting provisions to prevent the development of vacuum or pressure capable of distorting them as a result of the atmospheric temperature changes or while emptying or filling. The vent shall also permit the relief of internal pressures caused by exposure to fires. The vent size shall be determined by using the calculated wetted surface area in square feet ((the top is excluded) in conjunction with venting capacity table 10.1 of UL-142. The tank's vent shall also be equipped with a coupling device and shall be located to facilitate connection to a vent piping system. The dike's vent may be an opening for venting directly to the atmosphere and protection from the entrance of natural elements or debris shall be provided.*
- 2.2.17.5 *The primary tank is to be constructed of 7-gauge ASTM A569 or A-36 hot rolled steel. Internal baffles or reinforcement plates shall be located on a maximum of 24 inches centers in tanks up to 50-inch width and on a maximum of 19.5-inch centers in tanks over 60-inch width. At least one baffle shall separate the fuel suction pipe from the fuel return line.*
- 2.2.17.6 *The outer tank is to be constructed in a manner to be able to support four times the wet load of the pump and housing. All of the load is to be carried by the outer tank, so no load or vibration stress is placed on the primary tank. If the pump base tank is wider than the pump set to be supported, structural rails are to be incorporated to span the width of the base tank so that the load is transferred to the side rails of the tank. Vertical reinforcements shall be welded to the outer sides of the secondary tank or dike at a maximum of 45-inch centers on tanks up to 30 inches high and on 24-inch centers on tanks greater than 30 inches high. At least one vertical reinforcement shall be positioned adjacent to each mounting whole location.*
- 2.2.17.7 *Both primary and secondary tanks shall be fitted with the proper welded pipe fittings to accommodate the requirements for the fill port and normal and emergency venting.*
- 2.2.17.8 *The completed assembly is to be cleaned with a heated pressure wash followed by a chromium free post treatment to ensure proper paint adhesion. The tank assembly is to be painted with an epoxy ester primer and high-quality polyurethane enamel with total paint thickness of 3.5 mils. The painted tank assembly is to be baked at 180 degrees for 30 minutes to provide a hard durable finish.*
- 2.2.17.9 *Manufacturing and testing of this system shall be performed within the scope of Underwriters Laboratories, Inc. "Standard for Safety UL 14". A UL label shall be permanently attached to the tank system showing the following information:*
- *The registered UL mark and the name: Underwriters Laboratories, Inc.*
  - *A Control number and word "listed"*
  - *The Product's name as identified by Underwriters Laboratories Inc.*
  - *The serial number assigned by Underwriters Laboratories, Inc.*
  - *Other manufacturer's information may also be included.*

### 2.3 Automatic Starting



## PROJECT SCOPE

- 2.3.1 The engine shall be equipped with a factory installed Prime Guard microprocessor-based controller as supplied by Godwin Pumps of America, Inc. and designed to start/stop the engine at a signal supplied by high and low level floats or a 4-20 mA transducer.
- 2.3.2 Engine/Pump Control Specifications:
- 2.3.3 The engine shall be started, stopped, and controlled by a PrimeGuard high performance, state-of-the-art digital Controller as supplied by Godwin Pumps of America. The Controller shall be weatherproof enclosed, and contain an external, weatherproof, 12 position keypad accessible without the need to remove or open any protective cover or enclosure. It shall be designed to start/stop the engine at a signal supplied by high- and low-level floats or a 4-20 mA transducer. The PrimeGuard Control Panel shall provide the following functions without modification, factory recalibration, or change of chips or boards by simply accessing the keypad.
- 2.3.4 The keypad shall be a capacitive touch sensing system. No mechanical switches will be acceptable. The keypad shall operate in extreme temperatures, through ice, snow, mud, grease, etc., and maintain complete weather-tight sealing.
- 2.3.5 In automatic mode, the unit shall conserve energy and go to "sleep."
- 2.3.6 The PrimeGuard Controller shall function interchangeably from; float switches, pressure switch, or transducer, as well as manual start/stop by selection at the keypad. No other equipment or hardware changes are required.
- 2.3.7 The PrimeGuard Controller shall be capable of varying the engine speed to maintain a constant level in a process without at change to the panel other than via the keypad.
- 2.3.8 The start function can be programmed to provide three separate functions each day for seven days (i.e., a start, warm-up, exercise cycle on two separate days at different times and for a varying length of time, all via the keypad).
- 2.3.9 Manual-Automatic Button
- 2.3.9.1 *In Manual Mode, the "Start" button starts the engine and runs until "Stop" is pressed or an emergency shutdown occurs.*
- 2.3.9.2 *In Automatic Mode, start/stop sequencing is initiated by one normally-open and one normally-closed narrow angler float switch, a pressure switch, transducer, or a signal from a digital input.*
- 2.3.10 The Controller shall integrate the engine safety shut-off for low-oil temperature, high-temperature, and provide over-speed protection.
- 2.3.11 The Controller shall include standard field-adjustable parameters for engine cycle crank timer, shutdown time delay, warm-up time delay, and cool-down time delay.
- 2.3.12 The Controller shall have only one circuit board with eight built in relays. Each relay can be named to provide any function – all via the key play – without changing relays, chips, printed circuits, or any hardware or software.

## ITB 2022.04 Eight Inch Bypass Pump for Sundial Utilities

### PROJECT SCOPE

- 2.3.13 Standard components shall consist of (24) digital inputs, (7) analog inputs, (1) magnetic pick-up input, (8) 20-amp form "C" relays, (1) RS232 port, (1) RS485 port, (1) RS232/RS485 port, (1) J1939 port, and (1) 64x 128 pixel full graphic LCD display with backlight.
- 2.3.14 The industrially hardened PrimeGuard Controller shall withstand vibration of 3 g. 3 axis, frequency swept 10-1000 Hz, in an operating temperature range of 4 degrees to 176 degrees F. (-20 to 80 degrees C) and an operating humidity range of 0-95% non-condensing.

### **2.4 Options**

- 2.4.1 Fully Automatic Trickle Charger: The unit shall include a fully automatic trickle charger powered by 6-amps, 115 VAC.
- 2.4.2 Engine Block/Coolant Heater: The drive unit shall be supplied with an integral thermostatically controlled engine block heater (15-amp, 115 VAC required).
- 2.4.3 Light: The unit shall include a single switch operated 12 VDC light within the enclosure.
- 2.4.4 Floats: The unit shall be supplied with one (1) float assembly including two (2) N/O floats which shall integrate with the engine control panel via a single multi-pin plug.
- 2.4.5 Level Transducer: The unit shall be supplied with (1) one sewage compatible level transducer assembly including a single 4-20 mA level transducer (0-15 psig).

## **3 Part Three-Execution**

### **3.1 Manufacturer's Services**

- 3.1.1 The manufacturer shall furnish the services of a competent factory representative to do the following:
- 3.1.1.1 *Inspect the system prior to delivery, supervise the start up and testing of the system, and certify the system has been properly furnished and is ready for operation.*
- 3.1.1.2 *Instruct the owner's operating personnel in the proper operation and maintenance of the system for a period of not less than one half day.*

### **3.2 Tools and Spare Parts**

- 3.2.1 The manufacturer shall furnish the following on delivery of the pumping system"
- 3.2.1.1 *A recommended list of spare parts.*
- 3.2.1.2 *An Operations and Maintenance Manual.*

### **3.3 Warranty**

- 3.3.1 The manufacturer shall furnish the following to the owner:
- 3.3.1.1 *A copy of the engine manufacturer's parts and labor warranty.*
- 3.3.1.2 *A one-year Parts and Labor Warranty issued by the manufacturer on the pumpset. This warranty must cover all pump parts, including the mechanical seal.*

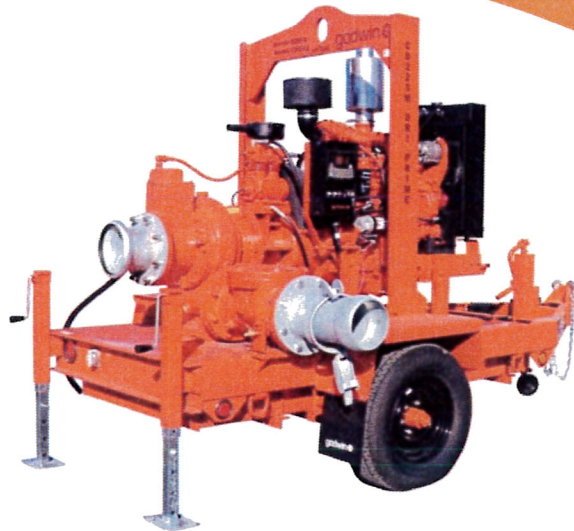


# CD225M Dri-Prime® Pump

The Godwin Dri-Prime CD225M pump offers flow rates to 3240 USGPM and has the capability of handling solids up to 3.0" in diameter.

The CD225M is able to automatically prime to 28' of suction lift from dry. Automatic or manual starting/stopping available through integral mounted control panel or optional wireless-remote access.

Indefinite dry-running is no problem due to the unique Godwin liquid bath mechanical seal design. Solids handling, dry-running, and portability make the CD225M the perfect choice for dewatering and bypass applications.



## Features and Benefits

- Simple maintenance normally limited to checking fluid levels and filters.
- Dri-Prime (continuously operated Venturi air ejector priming device) requiring no periodic adjustment. Optional compressor clutch available.
- Extensive application flexibility handling sewage, slurries, and liquids with solids up to 3.0" in diameter.
- Dry-running high pressure liquid bath mechanical seal with high abrasion resistant solid silicon carbide faces.
- Close-coupled centrifugal pump with Dri-Prime system coupled to a diesel engine or electric motor.
- All cast iron construction (stainless steel construction option available) with cast steel impeller.
- Also available in a critically silenced unit which reduces noise levels to less than 70 dBA at 30'.
- Standard engine John Deere 4045TF285 (T3 Flex). Also available with John Deere 4045HFC92 (IT4).

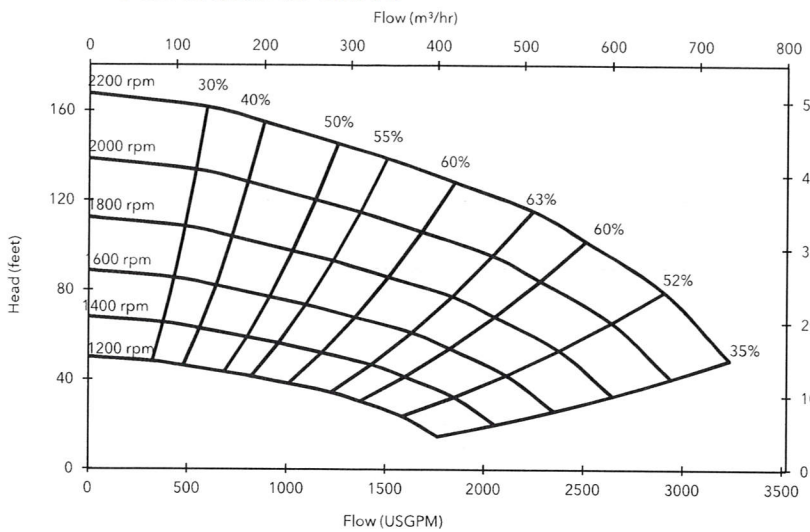
## Specifications

Suction connection	8" 150# ANSI B16.5
Delivery connection	8" 150# ANSI B16.5
Max capacity	3240 USGPM †
Max solids handling	3.0"
Max impeller diameter	11.4"
Max operating temp	176°F*
Max pressure	73 psi
Max suction pressure	73 psi
Max casing pressure	110 psi
Max operating speed	2200 rpm

\* Please contact our office for applications in excess of 176°F.

† Larger diameter pipes may be required for maximum flows.

## Performance Curve



## Materials

Pump casing & suction cover	Cast iron BS EN 1561 - 1997
Wearplates	High Chromium Cast Iron HC403:1977
Pump Shaft	Carbon steel BS 970 - 1991 817M40T
Impeller	Cast Steel BS3100 A5 Hardness to 200 HB Brinell
Non-return valve body	Cast iron BS EN 1561 - 1997
Mechanical seal	Silicon carbide face; Viton elastomers; Stainless steel body

## Engine option 1

John Deere 4045TF285 (T3 Flex), 99 HP @ 2200 rpm

Impeller diameter 11.4"

Pump speed 2200 rpm

### Suction Lift Table

Total Suction Head (feet)	Total Delivery Head (feet)				
	42	70	101	121	137
10	3148	2906	2325	-	-
15	2906	2543	2058	1695	-
20	1695	1695	1695	1453	-
25	1211	1211	1211	969	387

Fuel capacity: 100 US Gal

Max Fuel consumption @ 2200 rpm: 5.8 US Gal/hr

Max Fuel consumption @ 1800 rpm: 5.0 US Gal/hr

Weight (Dry): 4,440 lbs

Weight (Wet): 5,160 lbs

Dim.: (L) 155" x (W) 76" x (H) 93"

Performance data provided in tables is based on water tests at sea level and 20°C ambient. All information is approximate and for general guidance only. Please contact the factory or office for further details.

## Engine option 2

John Deere 4045HFC92 (IT4), 99 HP @ 2200 rpm

Impeller diameter 11.4"

Pump speed 2200 rpm

### Suction Lift Table

Total Suction Head (feet)	Total Delivery Head (feet)				
	42	70	101	121	137
10	3148	2906	2325	-	-
15	2906	2543	2058	1695	-
20	1695	1695	1695	1453	-
25	1211	1211	1211	969	387

Fuel capacity: 100 US Gal

Max Fuel consumption @ 2200 rpm: 5.4 US Gal/hr

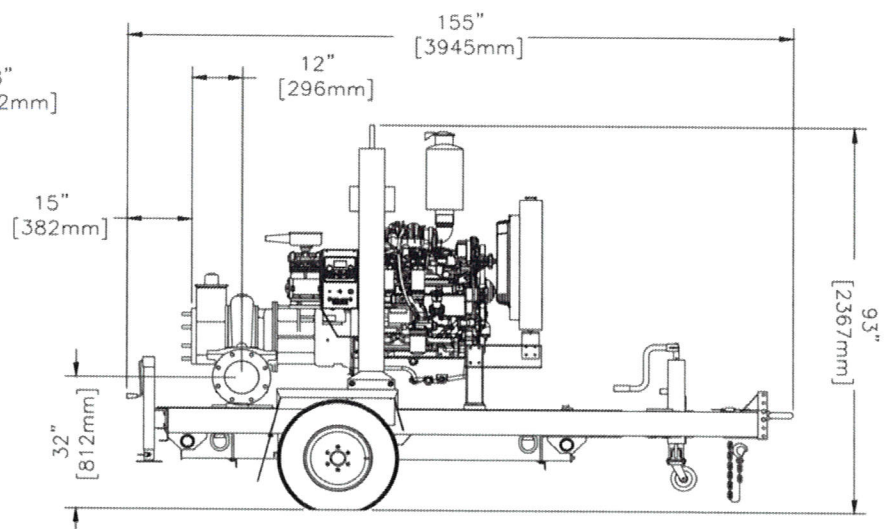
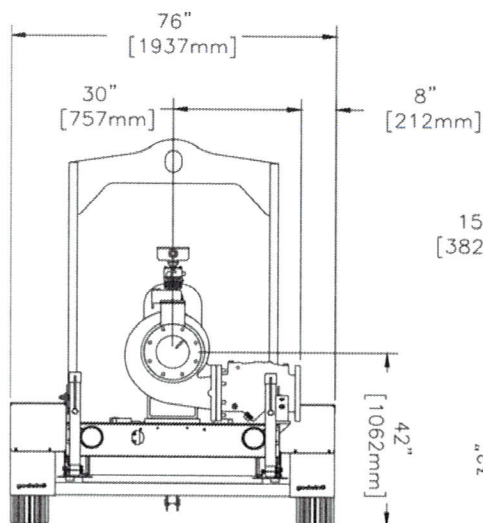
Max Fuel consumption @ 1800 rpm: 4.8 US Gal/hr

Weight (Dry): 4,680 lbs

Weight (Wet): 5,400 lbs

Dim.: (L) 155" x (W) 76" x (H) 93"

Performance data provided in tables is based on water tests at sea level and 20°C ambient. All information is approximate and for general guidance only. Please contact the factory or office for further details.



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