



**Division of Tencarva Machinery Company**

**3524 Craftsman Boulevard  
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**Company:** City of Palm Bay  
**Attn:** Adam Prestidge  
**Location:** Palm Bay FL  
**Phone:** 321-210-5414  
**Email:** Adam.prestidge@palmbay florida.org  
**From:** Robert Maxwell

**Date:** 7/19/2021  
**No. Pages:** 6  
**Quote No.:** 2121REM1  
**Terms:** N30 (WAC)  
**F.O.B.:** Shipping point  
**Freight:** included

Conditions of Service: Replacement seepex Cake Pump to commission #: 823663.2

We are pleased to quote as follows:

| Qty.                               | Description   | Price Each  | Delivery   |
|------------------------------------|---|-------------|------------|
| 1                                  | Seepex Cake Pump <ul style="list-style-type: none"> <li>• Commission#: 823663.2</li> <li>• Model: BTHE 35-24 / B2-B2-L8-F0-GAM</li> <li>• Assembled Package Includes: inlet feed hopper with ribbon auger, new rotor, stator, 25hp motor c-faced to a gear reducer, new TSE temperature switch, ultra-sonic level sensor. (reusing existing base and control panel)</li> </ul> <p><b>Notes:</b><br/>*Please see additional data sheets for more information</p> | \$92,450.00 | 8-10 weeks |
| <b>Quotation valid for 60 days</b> |   |             |            |

**Best Regards,  
Robert Maxwell**

qty.: 1

**Progressive cavity pump**  
**BTHE 35-24 / B2-B2-L8-F0-GAM**

**Application data**

|                          |                                       |
|--------------------------|---------------------------------------|
| Conveyed product         | Dewatered Sludge Cake                 |
| Remark                   | Duplicate to Commission #823663       |
| Flowability              | not flowable                          |
| Viscosity                | low viscosity (< 500 cP/mPas)         |
| Solids content           | not specified                         |
| Size of solids           | not specified                         |
| Density                  | unknown, 1 kg/dm <sup>3</sup> assumed |
| Product temperature      | 32°F - 113°F                          |
| pH value                 | 5-9                                   |
| Kind of operation        | continuous                            |
| Operating hours          | 8 h/day                               |
| Location                 | indoor, humid atmosphere              |
| Altitude of installation | up to 1000 m assumed                  |
| Surrounding temperature  | normal (32-113°F)                     |

**Performance data**

|                                    | <b>Capacity</b>        | <b>Pressure</b> | <b>Speed</b> |     |
|------------------------------------|------------------------|-----------------|--------------|-----|
|                                    | 15 USGPM               | 250 psi         | 69 rpm       | min |
|                                    | 25 USGPM               | 250 psi         | 89 rpm       | max |
| Starting torque                    | 1000 lb.ft             |                 |              |     |
| Req. operating power at pump shaft | 9.4 HP                 |                 |              |     |
| Inlet pressure                     | flooded (pressureless) |                 |              |     |
| NPSHr                              | 6.8 ft                 |                 |              |     |

Tolerances according to SEEPEX standards.

**Materials and executions**

|  |   |
|--|---|
| Installation                               | horizontal  |
| Direction of rotation                      | counter clockwise (left)  |
| Lantern - Design                           | with cover plates   |
| Lantern - Material                         | EN-JL 1040 (gci-25)   |
| Feed hopper - Design                       | Inlet hopper with separation, drain plug, and w/ cleanout and 4" Ansi Flush Conn in Pos 2 |
| Feed hopper - Material                     | 1.0037 (st. 37-2)   |
| Feed hopper - Connection design            | 1500 x 400 mm   |
| Feed hopper - Hopper position              | position 1  |
| Feed hopper - Flushing connection          | ANSI 4" Class 150   |
| Feed hopper - Flushing connection position | position 2  |
| Pressure branch - Design                   | standard  |
| Pressure branch - Material                 | EN-JL 1040 (gci-25)   |
| Pressure connection                        | 5" ANSI B16.5 Class 300 RF  |
| Joint - Design                             | UJ-sleeve prot. both sides 1.4404, divided  |
| Joint - Material                           | standard, holding bands 1.4301  |
| Joint - Universal joint sleeve: material   | NBR - Perbunan  |
| Coupling rod - Design                      | with stator-sided feed screw  |
| Coupling rod - Material                    | 1.0037 (st. 37-2)   |
| Ribbon auger - Design                      | reinforced w/ stiffening ring   |
| Ribbon auger - Material                    | 1.0037 (st. 37-2)   |
| Rotor - Design                             | standard  |
| Rotor - Material                           | 1.0503 (C45) / AISI 1045  |
| Rotor - Coating                            | ductile chromium coating  |
| Stator - Design                            | standard, with TSE, sensor sleeve 1.4404  |
| Stator - Material                          | NBR - Perbunan  |
| Shaft sealing                              | mechanical seal   |

|                                      |   |
|--------------------------------------|---|
| <b>Code</b>                          | GAM - single acting mechanical seal   |
| <b>Quench</b>                        | design 3<br>With refillable supply tank. Quench chamber is filled with SEEPEX 50300 (glycerine) or for food applications with SEEPEX 60200, container is empty and has to be filled before commissioning.<br>- capacity of supply tank: approx. 140 ml<br>- materials of construction: nickel plated brass, plexiglass, NBR |
| <b>Shaft diameter</b>                | 100 mm  |
| <b>Make</b>                          | Burgmann  |
| <b>Rotating/stationary seal face</b> | SiC SiC   |
| <b>Elastomers</b>                    | FPM   |
| <b>Spring</b>                        | 1.4571 / AISI 316Ti   |
| <b>Metal parts</b>                   | 1.4571 / AISI 316Ti   |
| <b>Type</b>                          | MG1-G60 Q1Q1 VGG  |
| <b>Casing - material</b>             | 1.4408 / ASTM A351 grade CF8M   |
| <b>Casing - connection standard</b>  | NPT   |
| <b>Plug-in Shaft - Design</b>        | standard  |
| <b>Plug-in Shaft - Material</b>      | 1.4021 / AISI 420   |
| <b>Bolting - Design</b>              | completely stainless steel  |
| <b>Painting - Number of colors</b>   | single-colored  |
| <b>Painting - Painted components</b> | complete combination  |
| <b>Painting - Color</b>              | Epoxy System (SEEPEX Blue)  |
| <b>Painting - Surface protection</b> | std. surface protection C2 (NDFT 95 µm)   |

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**Drive**

|   |   |            |            |
|---|---|------------|------------|
| <b>Type</b>                                   | Gear & Motor at freq. inv.<br>(Inverter is not included)                                |            |            |
| <b>Make</b>                                   | SEW   |            |            |
| <b>Model</b>                                  | RF107AM284RS  |            |            |
| <b>Mounting position</b>                      | B5  |            |            |
| <b>Ratio (i)</b>                              | 29.49   |            |            |
|   | <b>Norm</b>   | <b>Min</b> | <b>Max</b> |
| <b>Speed</b>                                  | 72 rpm  | 69 rpm     | 89 rpm     |
| <b>Motor speed</b>                            | 1800 rpm  | 1714 rpm   | 2224 rpm   |
| <b>Frequency</b>                              | 60 Hz   | 57 Hz      | 74 Hz      |
| <b>Make</b>                                   | Baldor  |            |            |
| <b>Model</b>                                  | CECP4103T   |            |            |
| <b>Rated output</b>                           | 25 HP   |            |            |
| <b>Rated speed</b>                            | 1800 rpm  |            |            |
| <b>Mounting position</b>                      | NEMA C-face/footed  |            |            |
| <b>Flange diameter</b>                        | 11.25   |            |            |
| <b>Shaft diameter</b>                         | 1.875   |            |            |
| <b>Starting</b>                               | direct on frequency inverter  |            |            |
| <b>Efficiency class</b>                       | IE1   |            |            |
| <b>Terminal box position acc. to supplier</b> | not specified   |            |            |
| <b>Cable entry position acc. to supplier</b>  | not specified   |            |            |
| <b>Voltage</b>                                | 230/460 V   |            |            |
| <b>Frequency</b>                              | 60Hz  |            |            |
| <b>Enclosure</b>                              | TEFC  |            |            |
| <b>Thermal class</b>                          | F   |            |            |
| <b>Winding protection</b>                     | M23A NO T-stats   |            |            |
| <b>Anti condensation heaters</b>              | E30 - 120V Space Heater   |            |            |
| <b>Remark for drive</b>                       | PREMIUM EFFICIENT TEFC (20:1 CT)  |            |            |
| <b>Remark for drive</b>                       | w/ Anti-Reversal Backstop (BS to allow CW rotation when viewing end of GR output shaft) |            |            |

The frequency inverter has to follow a linear U/f characteristic curve (constant torque).

It's essential to have a minimum overload capability of 150% for at least 60 seconds. (see technical data sheet)

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**Dry running protection device (TSE)**

|                                 |  |
|---------------------------------|--|
| <b>Design</b>                   | standard design, complete<br>- sensor sleeve fitted to the stator of the pump with integrated temperature sensor<br>- connection head (IP55)<br>- separate TSE control device suitable for mounting inside a control panel |
| <b>Voltage</b>                  | 110-115 V / 50-60 Hz   |
| <b>Temperature coefficient</b>  | NTC  |
| <b>Material sensor sleeve</b>   | 1.4404 / AISI 316L   |
| <b>Material connection head</b> | aluminium  |

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**Packing**

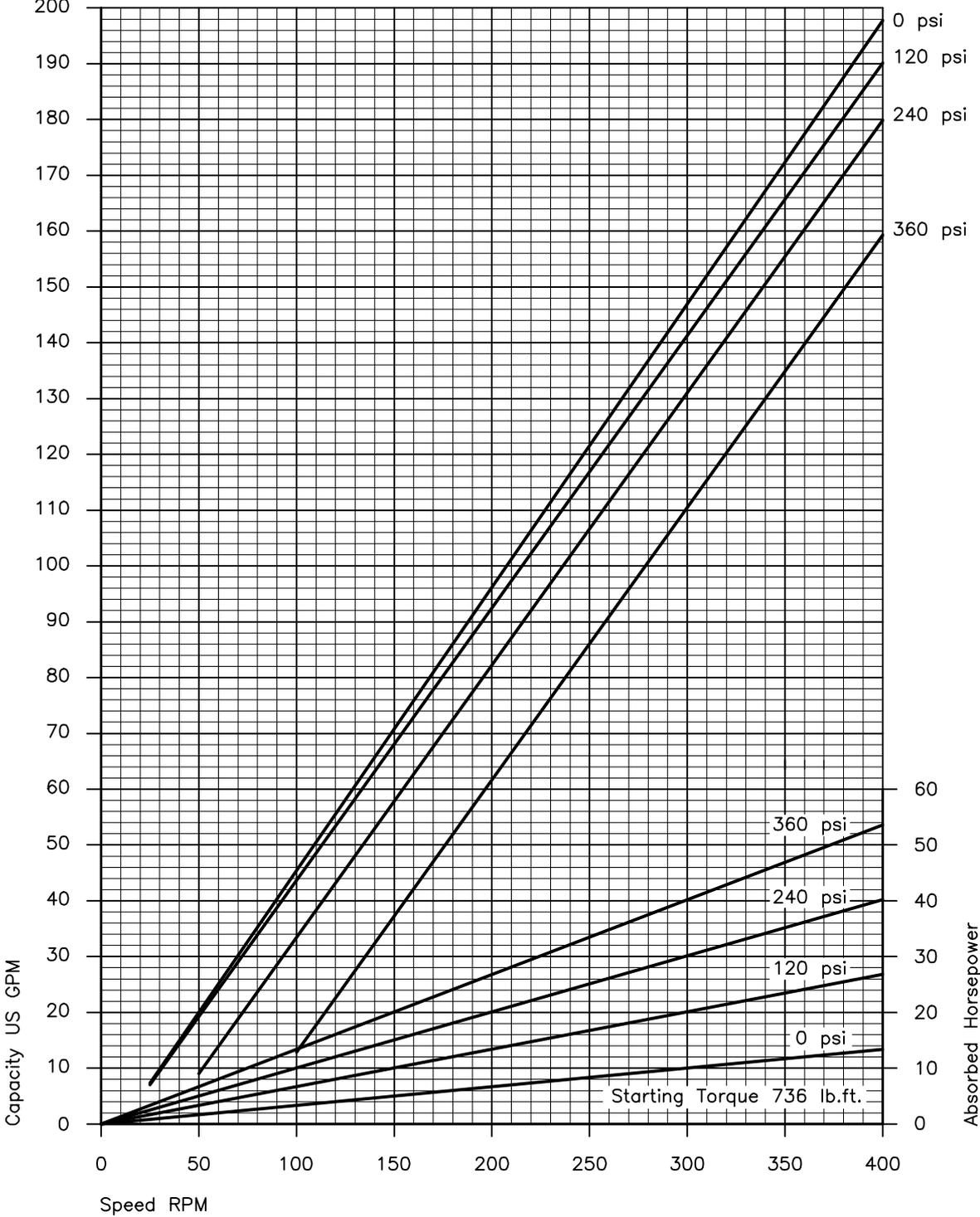
|                                      |                    |
|--------------------------------------|--------------------|
| <b>Type of packing</b>               | skid (US)          |
| <b>Type of transport</b>             | truck              |
| <b>Quantity of pumps per package</b> | 1 pump per package |

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**Accessories**

|               |  |
|---------------|--|
| <b>Design</b> | Qty (1) – Endress& Hauser FDU91 Ultrasonic Level Sensor w/ 5meter cables and SGREHFDU91RG1AA Alignment Unit FAU40-2G SGREHFAU402G and Measuring Transducer FMU90 (for wall mounting) Output signal 4-20mA / Connection Voltage 90-253 VAC, 50-60Hz SGREHFMU90R11CA |
|---------------|--|

Characteristic Curves  
Size  
**35-24**



Values based upon water 68°F ; For notes on drive selection refer to PER

Hudson Pump & Equipment  
A Division of Tencarva Machinery Company

**Quotation Terms and Conditions**

**Tencarva Machinery Company dba Hudson Pump & Equipment (“Tencarva”) agrees to contract with Buyer for the sale of the equipment described herein (the “Products”) and services to be performed by Tencarva in connection the Products (the “Services”) only if Buyer’s acceptance of Tencarva’s offer to sell contains all of the terms set forth herein. Tencarva hereby objects to any additional terms. Any confirmatory action by the Buyer or acceptance of the Products or Services shall constitute assent to these terms and any additional terms set forth therein shall not be effective or binding.**

1. The Services are warranted to be performed in a workmanlike manner. The determination of compliance with this warranty will be based on testing under controlled conditions with calibrated instruments in accordance with the standards of the Hydraulic Institute or other nationally recognized accreditation standards. If any nonconformity with this warranty appears within 45 days after the Services are performed, the exclusive obligation of Tencarva shall be to re-perform the nonconforming Services in a conforming manner. Such a correction of nonconformities shall be Buyer’s exclusive remedy with respect to the Services delivered or performed by Tencarva. Tencarva’s liability on any claim shall in no case exceed the purchase price allocable to the Services which gives rise to the claim.

2. To the extent assignable, Tencarva shall assign to Buyer, without recourse to Tencarva, all warranties of the manufacturer of the Products made with respect to the Products. Tencarva makes NO IMPLIED WARRANTIES OF ANY TYPE, WHETHER OF MERCHANTABILITY, OR FITNESS FOR A PARTICULAR PURPOSE with respect to the Products or Services, and no warranties or guaranties, express or implied, are made by Tencarva except as specifically provided herein.

3. IN NO EVENT SHALL TENCARVA BE LIABLE FOR INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES, INCLUDING, BUT NOT LIMITED TO, LOST PROFITS AND ATTORNEY’S FEES, WITH RESPECT TO THE PRODUCTS OR SERVICES OR OTHERWISE. Tencarva shall have no liability with respect to any installation adjustments, repairs or other work done upon or in connection with the Products by Buyer or others. Any cause of action against Tencarva arising out of or relating to the Products or the Services shall expire unless brought within one year of time of accrual thereof.

4. Once placed, orders for the Products or Services by Buyer may be canceled only with Tencarva’s approval upon payment by Buyer for work performed and/or expenses incurred by Tencarva to the date of cancellation. Buyer shall pay Tencarva for interest on any amount not paid when due at a rate of one and one half percent (1 1/2%) per month, or the maximum rate permitted by law, whichever is less, together with all costs of collection. All prices for Products and Services are exclusive of all taxes. Wherever applicable, any tax or taxes will be added to the invoice as a separate charge to be paid by Buyer.

5. To the extent that Products or any portion thereof are supplied according to Buyer’s design or instructions, are modified by Buyer, are combined by Buyer with equipment or things not furnished hereunder, or are used by Buyer to perform a process or produce a product, and by reason of said design, instructions, modification, combination, performance or production, a suit or proceeding is brought against Tencarva, Buyer shall defend, indemnify, release and hold harmless Tencarva, its directors, officers, employees, agents, representatives, successors and assigns against any and all liability, suits, actions, or proceedings, at law or in equity, and from any and all claims, demands, losses, judgments, penalties, damages, costs and expenses arising therefrom and in connection therewith, including, without limitation, patent infringement claims.

6. Buyer shall supply to Tencarva, in a timely fashion, all required technical information, including drawing approval and all required documentation. Tencarva shall not be liable for loss, damage, delay, and/or late delivery due to causes beyond its reasonable control, including, without limitation, late delivery by the manufacturer of the Products, fire, strike or concerted action of workmen, act or omission of any governmental authority, or delays in transportation. In the event of delay due to any such cause, the date of delivery will be postponed by such length of time as may be reasonably necessary to compensate for the delay.



Pump & Equipment

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Location: Palm Bay FL  
Phone: 321-210-5414  
Email: [Adam.prestidge@palmbay.florida.org](mailto:Adam.prestidge@palmbay.florida.org)  
From: Robert Maxwell

Date: 7/19/2021  
No. Pages: 2  
Quote No.: 21821REM2  
Terms: N30 (WAC)  
F.O.B.: Shipping point  
Freight: included

Conditions of Service: removal/installation of seepex Cake Pump

We are pleased to quote as follows:

| Qty.                               | Description  | Price Each  | Delivery |
|------------------------------------|--|-------------|----------|
| 1                                  | <p>Seepex Cake Pump Installation</p> <ul style="list-style-type: none"> <li>Removal of existing cake pump and installation of replacement new seepex cake pump</li> <li>Includes crane</li> <li>Includes all new gaskets, hardware and paint touch up of base and pump.</li> <li>Includes start up assistance</li> </ul> <p><b>Notes:</b></p> <ol style="list-style-type: none"> <li>Above does not include any of the electrical work as it was discussed to be done by the city ie: unwire motor, TSE, ultrasonic level transducer and then rewire once installation of new unit is complete.</li> <li>From the pictures and dimensions, we and the crane company believe we have enough room to remove the pump without removing any overhead piping. However, if we get the job the crane company would like to come out and verify the spacing. If it is deemed necessary to remove, we can offer that at a cost of <b>\$4,250.00</b> or the city may elect to do themselves per conversation.</li> </ol> | \$11,500.00 | -        |
| <b>Quotation valid for 60 days</b> |  |             |          |

Best Regards,  
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5. To the extent that Products or any portion thereof are supplied according to Buyer’s design or instructions, are modified by Buyer, are combined by Buyer with equipment or things not furnished hereunder, or are used by Buyer to perform a process or produce a product, and by reason of said design, instructions, modification, combination, performance or production, a suit or proceeding is brought against Tencarva, Buyer shall defend, indemnify, release and hold harmless Tencarva, its directors, officers, employees, agents, representatives, successors and assigns against any and all liability, suits, actions, or proceedings, at law or in equity, and from any and all claims, demands, losses, judgments, penalties, damages, costs and expenses arising therefrom and in connection therewith, including, without limitation, patent infringement claims.

6. Buyer shall supply to Tencarva, in a timely fashion, all required technical information, including drawing approval and all required documentation. Tencarva shall not be liable for loss, damage, delay, and/or late delivery due to causes beyond its reasonable control, including, without limitation, late delivery by the manufacturer of the Products, fire, strike or concerted action of workmen, act or omission of any governmental authority, or delays in transportation. In the event of delay due to any such cause, the date of delivery will be postponed by such length of time as may be reasonably necessary to compensate for the delay.