

**EBARA SEWAGE GRINDER PUMP  
48" DUPLEX STATION - 2" PIPING  
WITH SLIDE RAIL SYSTEM, V.B. AND F.D.E.P. PANEL  
TSC PRE-FAB PUMP SOLUTIONS**

MODEL TSC2-48.0 R9.dwg

NOTE: EMERGENCY CONTACT SIGN MUST BE DISPLAYED ON LIFT STATION PANEL  
CONTACT: KEITH MOHAMMED / PHONE: (832) 814-5946

2. GROUT FILLET (1 TO 1 SLOPE TO "HOPPER" BOTTOM)  
1. HOSE BIBB WITH REDUCED PRESSURE BACK FLOW PREVENTER  
FIELD INSTALL BY CONTRACTOR

JOB: \_\_\_\_\_  
QS: \_\_\_\_\_

**GENERAL NOTES**

FURNISH AND INSTALL EBARA SUBMERSIBLE GRINDER PUMPS:

**DESIGN CONDITION:**

MODEL	EBG-103	10 HP	HP
GPM	86	138	FT/TD
VOLTAGE	208 / 230 / 460	THREE	PHASE
DISCHARGE	2"	6.75"	IMPELLER

**SEWAGE GRINDER PUMP:** RATED FOR TWENTY (20) STARTS PER HOUR.

- OIL FILLED MOTOR DESIGNED FOR SEWAGE APPLICATION WITH CLASS F INSULATION.
- DUAL MECHANICAL SHAFT SEALS (SILICON CARBIDE / SILICON CARBIDE) LOCATED OUT OF THE PUMPAGE, IN A SEPARATE OIL FILLED CHAMBER.
- HIGH TEMPERATURE BALL BEARINGS B-10 RATING MINIMUM OF 50,000 HOURS, UPPER BEARING - SINGLE ROW AND LOWER BEARINGS - DOUBLE ROW TYPE.
- PUMP SHAFT HORSEPOWER (BHP) SHALL NOT EXCEED MOTOR RATED HORSEPOWER THROUGHOUT THE ENTIRE OPERATING RANGE OF THE PUMP PERFORMANCE CURVE.
- SINGLE PHASE MOTORS SHALL BE DUAL WOUND, CAPACITOR START-RUN AND CAPABLE OF OPERATING ON 208/230 VOLT WITH A 10% TOLERANCE VOLTAGE (190 TO 260). THREE PHASE MOTORS SHALL BE DUAL WOUND AND CAPABLE OF OPERATING ON 208/230 VOLT WITH A 10% TOLERANCE VOLTAGE (190 TO 260) OR OPERATE ON 460 VOLT BY CHANGING THE MOTOR LEADS INSIDE THE PUMP.

**FIBERGLASS WET WELL:** SHALL BE A ONE PIECE UNIT WITH INTEGRAL BOTTOM, WALL AND UPPER FLANGE. THE ENTIRE FIBERGLASS WET WELL SHALL HAVE A DYNAMIC LOAD RATING OF 16,000 FT/LBS. EACH UNIT MUST BE SERIAL NUMBERED TO IDENTIFY THE TEST PROCEDURE. ASTM D 3753 & H-20 SPECIFICATIONS SHALL BE REQUIRED AS MINIMUM.

**ALUMINUM HATCH:** TSC MODEL-54R (54") ROUND WITH 24" X 36" LOCKABLE HATCH, REINFORCED FOR LOAD RATING OF 300 LBS/FT WITH HOLD OPEN SAFETY ARM, LOCKING DEVICE FOR HASP TYPE PADLOCK AND STAINLESS STEEL HARDWARE.

**VALVE BOX:** FIBERGLASS COMPOSITE (H-10 TRAFFIC RATED) WITH INTEGRAL BOTTOM. (FOR 1 1/4" AND 2" DISCHARGE PIPING SYS HEADER SYSTEM) SHALL BE 26" X 38" X 18" WITH 17" X 30" LIMITED ACCESS LID

**ACCESSORIES:** #304 S/S - GUIDE RAILS, UPPER GUIDE RAIL BRACKETS, CABLE HOLDER, ANCHOR BOLTS AND PUMP LIFTING CHAINS.

**VALVES:** SHALL BE SEWAGE SERVICE DESIGN BRASS SWING CHECK VALVES WITH TOP ENTRY CLEAN-OUT PORT AND BRASS WEDGE GATE VALVE OPEN 100%.

**PIPING:** 2" SCHEDULE 80 PVC.

**FLOAT SWITCHES:** UL LISTED SJ ELECTRO MODEL SJ 30 SW

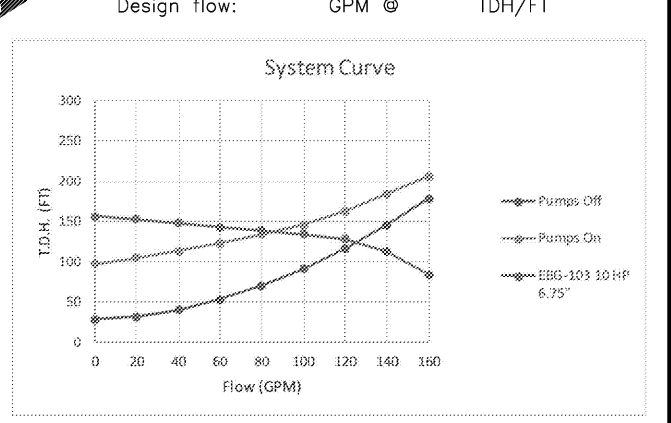
**PUMP SUPPLIER:** SHALL PROVIDE SUBMERSIBLE PUMPS, SLIDE RAIL ASSEMBLIES, CONTROL PANEL, JUNCTION BOX, FLOAT SWITCHES, ALUMINUM HATCH AND ACCESSORIES TO INSURE PROPER OPERATION & WARRANTY.

THE COMPLETE PACKAGE PUMPING SYSTEM SHALL HAVE PUMP BASES, SLIDE RAIL ASSEMBLY AND DISCHARGE PIPING ASSEMBLED BY TECHNICAL SALES CORPORATION READY TO SHIP FOR FIELD INSTALLATION. THE MANUFACTURER OF PRE-FAB PUMP SOLUTIONS.

TECHNICAL SALES CORPORATION, 4621 N. HALE AVE TAMPA, FL 33614 (813)876-9256

**Ebara Submersible Pumps**

EBARA EBG-103 (10 HP) Synchronous Speed: 3450 RPM



**PUMP PERFORMANCE CURVE**

**CONTROL PANEL - SHALL CONFORM TO FL DEP 64-604.42(A)**

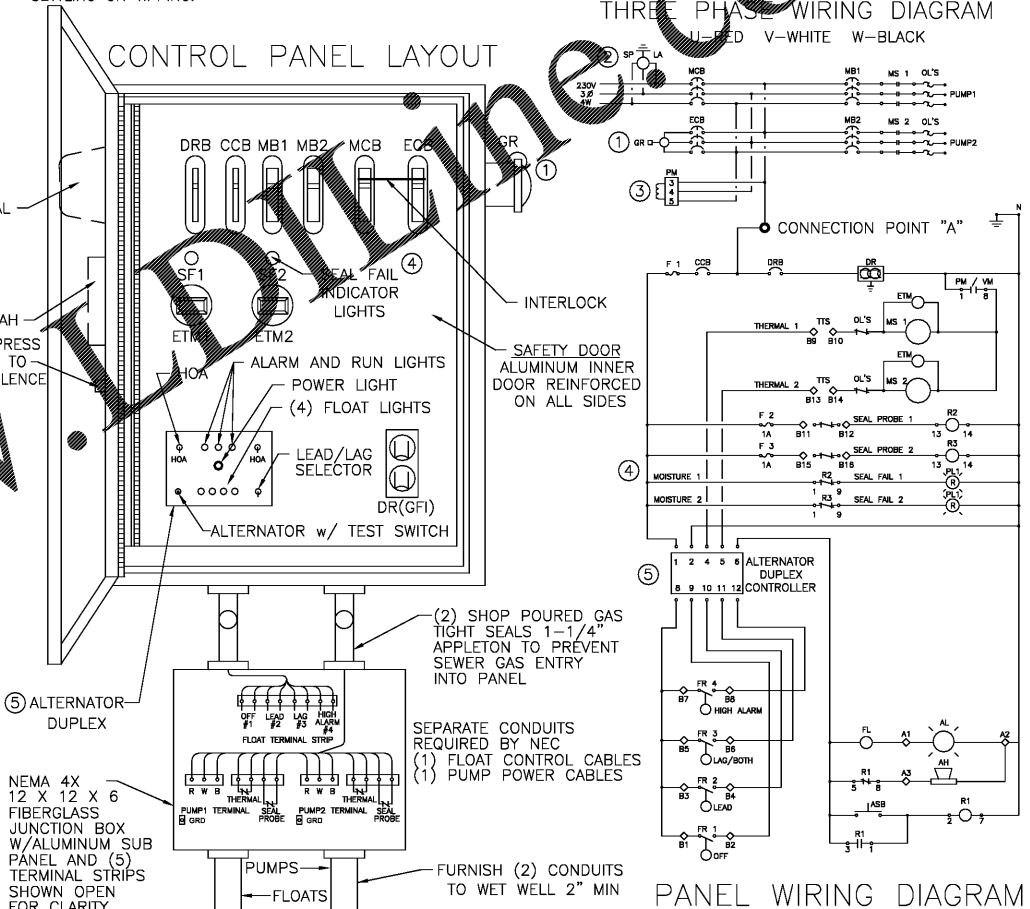
CONTROL PANEL SHALL BE TSC MODEL # 38-D IN NEMA 4X FIBERGLASS ENCLOSURE. THE PANEL SHALL MEET STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION (DEP), ENVIRONMENTAL PROTECTION COMMISSION (EPC) AND LOCAL CODE REQUIREMENTS GOVERNING PRIVATE LIFT STATIONS.

FLOAT SWITCHES AND CONTROL SYSTEM SHALL BE UL LISTED AND INTRINSICALLY SAFE. ALL COMPONENTS SHALL BE UL LISTED.

A JUNCTION BOX IS REQUIRED, WITH SHOP POURED SEALS BETWEEN BOX AND CONTROL PANEL TO PREVENT SEWER GAS ENTRY INTO CONTROL PANEL.

ELECTRICAL CONTRACTOR TO PROVIDE SERVICE DISCONNECT WITH LIGHTNING ARRESTOR MOUNTED PER LOCAL CODES.

THE CONTROL PANEL SHALL BE SUITABLY INSTALLED TO PREVENT SETTLING OR TIPPING.



**LEGEND**

- AH ALARM HORN
- AL ALARM LIGHT
- ASB ALARM SILENCE BUTTON
- ATS ALTERNATOR W/ TEST SWITCH
- CCB CONTROL CIRCUIT BREAKER
- DR DUPLEX RECEPTACLE
- DRB DUPLEX RECEPTACLE BREAKER
- ECB EMERGENCY CIRCUIT BREAKER
- ETM ELAPSED TIME METER
- F FUSE
- FL FLASHER
- FS FLOAT SWITCH (REGULATOR)
- GR GENERATOR RECEPTACLE
- GRD GROUND
- HOA HAND-OFF-AUTOMATIC SELECTOR
- LA LIGHTNING ARRESTOR
- MB MOTOR BREAKER
- MCB MAIN CIRCUIT BREAKER
- MS MOTOR STARTER
- N NEUTRAL
- OL'S OVERLOAD HEATERS
- PM PHASE MONITOR
- PTS PUMP TERMINAL STRIP
- R RELAY
- RC RUN CAPACITOR
- RD DISCHARGE RESISTOR
- RL PUMP RUN INDICATORS
- RTS REGULATOR TERMINAL STRIP
- SC START CAPACITOR
- SF SEAL FAIL (SHAFT)
- SP START RELAY
- SP SURGE PROTECTOR
- TTS THERMAL TERMINAL STRIP

PANELS SHALL CONFORM TO FLORIDA DEP 64-604.400

- GENERATOR RECEPTACLE FOR EMERGENCY POWER CONNECTION WITH INTERLOCK
- SURGE PROTECTION AND LIGHTNING PROTECTION ON ALL INCOMING LEGS
- PHASE PROTECTION SHALL BE PROVIDED
- SHAFT SEAL FAIL DETECTION
- ALTERNATOR w/ TEST SWITCH

PANEL MANUFACTURER SHALL BE A "UL" LISTED SHOP.

TSC DUPLEX GRINDER PUMP STATION  
FIBERGLASS WET WELL

**TECHNICAL SALES CORPORATION**  
TSC PRE-FAB PUMP SOLUTIONS  
WATERWORKS & WASTEWATER SPECIALTIES

Representing Innovative Manufacturers  
MODEL TSCE2-48.0

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**ISSUED FOR PERMITTING**

DESIGNED BY:	TS	DATE:	12/07/19
DRAWN BY:	LB	JOB NO.:	19-099
CHECKED BY:	TS	APPROVED BY:	
NO.	BY	DATE	REVISION DESCRIPTION
1	JO	03/03/20	PER HILLSBOROUGH COUNTY COMMENTS
2	JO	03/27/20	PER FOOT COMMENTS
3	CEJ	05/07/20	PER HILLSBOROUGH COUNTY COMMENTS

**BEFORE YOU DIG  
CALL SUNSHINE STATE  
ONE CALL OF FLORIDA  
1-800-432-4770**

FOR THE LOCATION OF UNDERGROUND UTILITIES, AN APPROXIMATE LOCATION HAS BEEN INDICATED BY THE CONTRACTOR. THE CONTRACTOR HAS NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION OF ALL UTILITIES BEFORE ANY EXCAVATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MAY BE OCCURRED BY THE CONTRACTOR FAILURE TO EXACTLY LOCATE AND PREPARE ANY AND ALL UNDERGROUND UTILITIES.



LAURIE S. BURCAW, PE #46064

**BEACON CIVIL ENGINEERING**

LAND DEVELOPMENT ENGINEERS  
8345 GUNN HIGHWAY  
TAMPA, FL 33626

**TAKE-5 OIL CHANGE OF SEFFNER**

11909 E DR MARTIN LUTHER KING JR BLVD, SEFFNER, FL.

LIFT STATION DETAILS