

ADDENDUM NO. 2

TO: ALL PLAN HOLDERS

RE: City of Dierks, Arkansas-Wastewater Improvements

ADDENDUM DATE: November 3, 2025

The Plans, Specifications and Contract Documents for the above referenced project are hereby modified as follows:

Clarifications-

Item 27- Reconnect Existing Long Side Service to new main shall include any bore and/or asphalt repair as necessary to complete.

Deduct Alternate 1 will include work on sheets 7, 8, 9, 44, and 45.

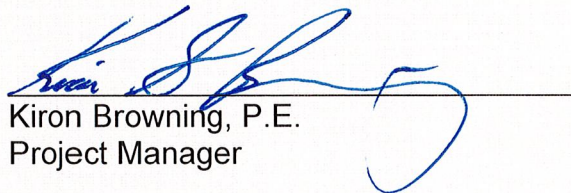
Deduct Alternate 2 will include work on sheets 5, 6, 39, 40, 41, 42, and 43.

Technical Addition:

Grinder Pump Specification-Attach the included Simplex Grinder Pump Station Specification to the existing specifications as attachment B.

ADDENDUM NO.2 ISSUED BY:

A.L. FRANKS ENGINEERING


Kiron Browning, P.E.
Project Manager



ATTACHMENT B

**PUMPS AND POWER COMPANY
GRINDER-PAK
SIMPLEX 7010 GRINDER PUMP STATION SPECIFICATIONS**

Furnish and install one (1) simplex *GRINDER-PAK*, pre-packaged grinder pump station as manufactured by Pumps and Power Company of ElDorado, Arkansas. 1-870-862-6679 The packaged pump station shall consist of three items and shall be shipped as such. These three principal items shall be: (1) the pump; (2) the inlet hub(s); (3) the fiberglass retention basin complete with discharge piping, pump guide rail assembly, cover and pre-mounted control panel.

PUMPS

These specifications cover the design, performance, and installation of submersible grinder pumps intended for wet well applications. The pump assembly, including the liquid end and the motor, shall be of the design and production of only one manufacturer, and shall be in full compliance with these specifications.

General Conditions

Furnish and install one (1) ZOELLER 7010 electric submersible sewage grinder pump. The pump shall be 2HP/1Ph/60Hz/230V/3600RPM. The pump shall consist of a single-stage, non-clog centrifugal pump with a cutter attachment, close coupled by a common shaft to a squirrel cage, induction type electric motor assembled in a single body, watertight aggregate, suitable for wet well. Pump discharge shall terminate with 2" NPT horizontal connection.

Performance Guarantee

The pump shall be capable of delivering raw, unscreened sewage at:

20 GPM @ 40' TDH

Pump Design

The pump shall be of the centrifugal type with the rotating cutter mounted on the pump shaft directly against the impeller. The stationary cutting disk shall be mounted in an adjustable bottom plate. The bottom plate shall be cast with grooves threading outward from the center opening of the plate to the outer diameter. The impeller shall be a multiple vane, centrifugal, open type of cast iron, ASTM A48 Class 40B cast iron. The cutter material shall be of AISI 440C stainless steel with the addition of cobalt, vanadium, and molybdenum for superior abrasion resistance and hardness of 58-62 Rockwell C.

All other major components, including the motor stator housing, motor lifting cover, seal oil chamber, and the volute shall be constructed of ASTM A48 Class 40B high tensile strength, gray cast iron free from rough spots or other irregularities.

The pump shaft, shared by the rotating cutter, impeller, and motor, shall be a short overhang shaft constructed of AISI 430F stainless steel and shall have generous shoulder fillet radii to minimize stress concentration and fatigue.

The shaft shall be supported by anti-friction bearings. The lower bearing shall be a double-row, deep groove ball bearing, axially retained to sustain both axial and radial loads. The upper bearing shall be a single-row, deep groove ball bearing, axially floating to sustain radial loads only.

Watertight integrity shall be maintained by a cable inlet assembly in a side entry chamber integral with the motor housing, mechanical shaft seal, and between major castings by O-rings confined within closely fitted, high surface quality rabbet joints compressed to the prescribed dimension only by metal-to-metal contact.

All outside surfaces shall be coated with a corrosion resistant material similar to Sherwin Williams "Sher-Tar" coal tar epoxy.

Shaft Seals

The pump shall be provided with a tandem mechanical shaft seal system. The lower seal (pump side) shall be the mechanical type with silicon carbide faces. The entire mechanical portion shall be enclosed in a Buna-N boot to prevent solids from collecting in the mechanical portion. This lower seal shall operate in an oil chamber. Carbon ceramic seals, due to their inferior hardness will not be considered. The upper shaft seal shall be a double lip Buna-N type seal.

Motor Construction

The pump shall be driven by a submersible squirrel cage type electric motor rated at 2 HP at 3450 RPM 208 volts three phase. The full load current shall not exceed 8 amps. The locked rotor amps shall not exceed 27 amps. The motor shall be NEMA design B for continuous duty, capable of sustaining 10 starts per hour. The motor shall have a service factor of 1.15 and shall be non-overloading for the selected performance curve.

All stator windings and leads shall be insulated with moisture resistant Class F insulation, capable of withstanding 155° C maximum temperature, dipped and baked three times. Upon assembly, the stator shall be heat-shrink fitted into the stator housing; the use of bolts, pins, or other fastening devices which would require penetration of the stator housing, shall not be acceptable.

The motor shall have bi-metallic thermal switches imbedded in each phase of the winding to sense high temperature. The rating of the switch shall be 140° C, + or - 5° C. The control current shall be connected through the bi-metallic switches so that the motor is shut down should a high temperature condition exist. The switches shall be self-resetting when the motor cools. Motors without one (1) thermal switch per phase, i.e. one (1) thermal switch for single phase motors, three (3) thermal switches for three phase motors, shall not be considered equal.

The pump/motor shall have 20 feet of power cable. Cable shall be color coded or numbered for simple field installation.

WET WELL AUTOCOUPLING

An auto coupling assembly shall be employed for the pump which shall eliminate the need for service personnel to enter the wet well to service the pump. The system shall allow the lowering of the pump into the wet well along rigid guide pipes resulting in a self-engaging, firm, leak proof coupling of the volute outlet to a receiving base anchored to the floor which shall form the discharge pipe connection. Once seated, the pump shall be entirely supported by the auto coupling base without any reliance on additional supports.

The guide rail assembly shall be constructed of ASTM-A48-76 Class 40 gray iron. The auto coupling shall mount to the pump discharge and mate in the slide rail base provided. Base shall be mounted in the basin with stainless steel bolts. Base shall terminate with a 2" NPT vertical discharge connection. Sealing of the pump at the discharge flange shall be accomplished by a simple downward linear motion of the pump with the entire weight of the guided pump to press against the discharge connection. No part of the pump shall bear directly on the basin floor and no rotary motion of the pump shall be required for sealing. A guide claw, attached to the pump discharge, shall guide the pump up and down. No less than two round slide rails of stainless steel 1" pipe shall be required.

For basins over 10' deep, stainless steel intermediate brackets will be required at the half-way point, i.e. 12' deep basin, bracket at 6' interval, for added structural integrity.

FLOW CALCULATION FEATURE

In order to provide service personnel with a means of calculation pump station flow, the pump station shall be provided with a Flow Calculation Feature (FCF). The FCF shall consist of a visual device (or devices) incorporated into the pump station to allow the user to calculate the output of the pumping station. Calculation of flow shall be accomplished via coordination with the manufacturer's supplied data sheet and the FCF and shall require no special tools or instruments. The FCF shall require no electrical or pneumatic devices to function and shall not increase the cost of the pumping station.

Units without the FCF feature shall not be considered equal.

CONTROL 230 VOLT SINGLE PHASE

The electrical control equipment shall be mounted within a NEMA 4X dead front type control enclosure fabricated of fiberglass. Enclosure door shall be gasketed with neoprene, shall be hinged, and shall be equipped with captive closing hardware. Control compartment shall incorporate a removable back panel on which control components shall be mounted. Back panel shall be secured to enclosure with collar studs.

All operating controls and instruments shall be securely mounted in such a manner that any or all standard options offered by the pump station manufacturer may be added in the field without rearrangement of existing controls and instruments. All controls and instruments shall be clearly labeled to indicate function.

All motor branch components shall be of the highest industrial quality, securely fastened to a removable sub-plate with screws and lock washers. The sub-plate shall be tapped to accept all mounting screws. Self-tapping screws shall not be used to mount any components.

A properly sized, heavy duty air circuit breaker shall be furnished for the pump motor and two accessory circuit breakers shall be provided. All circuit breakers shall be sealed by the manufacturer after calibration to prevent tampering.

Included shall be one across-the-line magnetic starter. The starter shall have an ambient compensated, bi-metallic, quick trip, overload relay.

The control circuit shall be protected by a thermal magnetic air circuit breaker or fuse which shall be connected in such a manner as to allow control power to be disconnected from all control circuits. The control voltage shall be 110 volts A.C.

A pump mode selector switch shall be connected to permit manual start and manual stop of the pump and to select automatic operation of the pump under control of the level control system. Manual operation shall over-ride all shutdown systems, but not the motor overload relay.

Control panel shall be provided with a pilot light for the pump motor. Light shall be wired in parallel with the pump motor starter to indicate that the motor is or should be running.

LEVEL CONTROL SYSTEM

The level control system shall start and stop the pump motor in response to changes in the wet well water level as set forth herein.

Type D.C.L.M.

The level control system shall consist of D.C.L.M. level control which shall extend into the wet well. This system shall consist of a minimum of two (2) devices for simplex pump control. D.C.L.M. level control shall be of the adjustable displacement compensator type with smooth exterior surfaces to prevent accumulation of debris. Displacement compensator shall be zinc plated to inhibit corrosion and shall require no special tools for adjustment. Devices shall have a solid polyurethane enclosure in which shall be secured a liquid metallic media hermetically sealed in a stainless steel compartment. The system shall inhibit rotational sensitivity, wire stress, and the consequences of impact.

Transmission of the control signal shall be via a chlorinated polyethylene, 300 volt, dual conductor, 18 gauge, type SJOOW cord. The standard length of this transmission cable shall be 30' or as required.

D.C.L.M. level control, by virtue of design, shall not be affected by Y2K, shall not be position sensitive, shall not be affected by venting, and shall not require support rods.

D.C.L.M. level control shall be corrosion resistant to most fluids, shall be capable of operation in temperatures up to 170° F, shall have a standard rating of 10 amps at 115 volts AC, shall be capable of use with intrinsically safe circuits, and shall have a minimum life of over one (1) million cycles of operation.

The D.C.L.M. level control shall be terminated in a NEMA 4X enclosure. This enclosure shall contain corrosion resistant, strain relief fittings. Strain relief fittings shall also preclude the incursion of gasses into the enclosure. The enclosure shall be anchored to the base plate with four (4) stainless steel studs and bolts. The enclosure cover shall be secured with four (4) stainless steel thumb screws.

The pump station shall come with the D.C.L.M. level control pre-connected to the interface connections in the pump control panel.

Sequence of Operation (Emptying a Vessel)

Upon operator selection of automatic operation, the D.C.L.M. level control shall start the pump motor when water rises to the "pump start" level. When the water is lowered to the "pump off" level, the system shall stop the pump. These actions shall constitute one pumping cycle.

Should the water level rise to the "high water alarm" level, the D.C.L.M. shall energize a 115 volt AC circuit for an external alarm device. An indicator, visible for not less than 100 feet, shall indicate a high level condition exists. The alarm signal shall maintain until the wet well level is lowered and the alarm circuit automatically reset.

ALARM LIGHT

The alarm light shall consist of a flashing red light in a weather proof fixture with a UV stabilized, shatter resistant, plastic lens. Lens shall be 3½" in diameter and 6-1/8" tall. Lights requiring guards for shatter resistant properties shall not be acceptable.

Alarm light shall be of moisture-resistant construction with no exposed metal parts and shall have an impact-resistant thermoplastic base.

The alarm light circuit shall be equipped with a repeat cycle timer causing the alarm light to flash. Flash rate shall be approximately 1 second (½ second on and ½ second off).

RETENTION BASIN

The basin shall come completely assembled. The cover plate with control panel shall be mounted on the basin. Discharge piping and lift out guide rail assemblies shall be installed in the basin.

General

The basin shall be constructed of chopped fiberglass via the spray up method. The basin shall have an anti-flotation flange. The anti-flotation flange shall be no less than 3" wider than the O.D. of the basin and no less than ½" thick. The basin shall be 36" I.D. and 60" deep and have a wall thickness of no less than .250". The top flange of the basin shall be no less than 3" wider than the O.D. of the basin and no less than ½" thick.

Materials

The resins used shall be a commercial grade unsaturated polyester resin. The reinforcing materials shall be commercial Grade "E" type glass in the form of mat, continuous roving, chopped roving, roving fabric, or a combination of the above, having a coupling agent that will provide a suitable bond between the glass reinforcement and the Resin.

Reinforcing materials used on the surface exposed to the contained substance shall be a commercial grade chemical-resistant glass that will provide a suitable bond with the resin and leave a resin rich surface.

Fillers shall be inert to the environment and wet well construction. Additives such as thixotropic agents, catalysts, promoters, etc., may be added as required by the specific manufacturing process to be used. The resulting reinforced plastic material must meet the requirement of this specification.

Fabrication

The exterior surface shall be relatively smooth with no sharp projections. Hand work finish is acceptable if enough resin is present to eliminate fiber show. The exterior surface shall be free of blisters larger than ½" in diameter, delamination, and fiber show.

The interior surface shall be resin rich with no exposed fibers. The surface shall be free of grazing, delamination, blisters larger than 1/2" in diameter, and wrinkles of 1/8" or greater in depth.

Surface pits shall be permitted, up to 6 square feet, if they are less than 3/4" in diameter and less than 1/16" deep.

The bottom is to be fabricated using fiberglass material as previously stated. The bottom shall be attached to the wet well pipe with fiberglass lay up to comply with ASTM-D3299 specifications. When reinforcement is necessary for strength, the reinforcement shall be completely enclosed with a fiberglass lay up per ASTM-D3299.

Defects Not Permitted

Exposed Fibers: glass fibers not wet out with resin.

Resin Runs: runs of resin and sand on the surface.

Dry Areas: areas with glass not wet out with resin.

Delamination: separation in the laminate.

Blisters: light colored areas larger than 1/2" in diameter.

Crazing: cracks caused by sharp objects.

Pits or Voids: air pockets.

Wrinkles: smooth irregularities in the surface.

Sharp Projection: fiber or resin projections necessitating gloves for handling.

Physical Requirements

The complete basin shall have a minimum dynamic load rating of 16,000 ft-lbs when tested in accordance with ASTM-D3757, latest edition, Section 6. To establish this rating, the complete wet well shall not leak, crack, or suffer damage when load tested up to 40,000 ft-lbs and shall not deflect vertically downward more than 1/4" at the point of load application when loaded to 24,000 pounds.

The wet well cylinder shall have a minimum pipe stiffness value as shown below when tested in accordance with ASTM-D3757, latest edition, Section 6.

Stiffness Requirements

Length (Ft)	F/AY (PSI)
10 to 20	2.01
21 to 30	3.02
31 to 40	5.24

Physical Properties

	Hoop Direction	Axial Direction
Tensile Strength (PSI)	18,000	5,000
Tensile Modules (PSI)	0.8×10^6	0.7×10^6
Flexural Strength (PSI)	26,000	4,500
Flexural Modules (PSI) (no ribs-48", 60", 72")	1.4×10^6	0.7×10^6
(with ribs-96", 144")	0.7×10^6	0.7×10^6

BASIN COVER PLATE

The cover shall be adequately sized for the retention basin. Cover plate and door leaf shall be ¼" thick aluminum diamond plate reinforced for a 300 P.S.F. live load. The cover shall have six (6) 5/8" diameter holes equally spaced around the perimeter to bolt it down to the basin. The access door shall be equipped with a flush drop handle that does not protrude above the cover, and a stainless steel hold open arm with red vinyl grip that automatically locks the cover in the 90° open position. The door shall have stainless steel hinges and stainless steel tamper resistant bolts/locknuts. A staple for a padlock shall be supplied for security. All stainless steel components shall be type 316 alloy. The door shall be manufactured and assembled in the United States. Manufacturer shall guarantee the door against defects in materials and workmanship for a period of ten (10) years.

Retention basin cover plate shall include a 2" wet well vent; control panel mounting bracket; and a NEMA 4X junction/pull box.

DISCHARGE PIPING

The discharge piping shall be 2" stainless steel fittings. The discharge piping shall include one 2" check valve and one 2" bronze gate valve. The assembly shall terminate in a 2" threaded coupling on the outside of the basin 18" from the top.

Ball Check Valve

The ball check valve shall be designed especially for use with sewage pumps and applications involving viscous liquids or slurries. The ball shall have sufficient weight to seat tightly even in high viscous liquid, but shall open freely so that the headloss is minimal. While it is recognized that the preferred installation of the ball check valve is in the vertical position, to insure that gravity will seat the ball properly each time, the ball check valve shall be capable of being mounted in the horizontal position when no less than 25' of static head is available.

The body of the ball check valve shall be constructed of A-48 cast iron with epoxy coating. The ball shall be a phenolic sinking ball which operates on gravity with a nitrile seat seal. The pressure rating of the ball check valve shall be 150 PSI and it shall be capable of operating in temperatures up to 180° F. Ball check valve shall come equipped with a two bolt access cover allowing removal of the ball and full access to the valve for easy clean-out, if required. Bolts and nuts shall be 304 stainless steel. Ball check valves with pipe plug clean-out ports, not allowing full access to the valve, shall not be acceptable.

Gate Valve

Gate valve shall be of the non-rising stem type. The body of the valve, the bonnet and the wedge shall be constructed of cast brass ASTM B-584, alloy C84400. The stem shall be constructed of bronze ASTM B99, alloy C65100 H04 and the stem O-ring shall be EPDM. The hand wheel shall be constructed of aluminum, ASTM B-85, alloy A03800 and the hand wheel screw shall be type 430 stainless steel. Gate valves shall carry a maximum working pressure of 200 PSI.

WARRANTY

All components of the Grinder Pump Station shall be guaranteed by the manufacturer for a period of one (1) year from the date of shipment against defects in materials and construction.

The equipment, apparatus, and parts furnished shall be warranted for a period of one (1) year excepting only those items that are normally consumed in service such as light bulbs, oil grease, packing, gaskets, O-rings, etc.

Trusted. Tested. Tough.®



SECTION: Z3.10.100
ZM2392
1224
Supersedes
0224

MAIL TO: P.O. BOX 16347 • Louisville, KY 40256-0347
SHIP TO: 3649 Cane Run Road • Louisville, KY 40211-1961
Tel: (502) 778-2731 • 1 (800) 928-PUMP

Visit our website:
zoellerengineered.com

Product information presented here reflects conditions at time of publication. Consult factory regarding discrepancies or inconsistencies.



MODELS 7008 & 7010

TECHNICAL DATA

1.0 & 2.0 HP



MODELS:	☐ 7008	☐ 7010
PUMP NAME PLATE HORSEPOWER:	1.0	2.0
SERVICE FACTOR:	1.2	1.2
MAXIMUM KW INPUT:	2.1	3.4
STANDARD IMPELLER DIAMETER:	4.25"	5.825"
DISCHARGE SIZE:	☐ 1.25" VERTICAL OR ☒ 1.25" HORIZONTAL	

IMPELLER TYPE:	VORTEX, ENGINEERED PLASTIC	MECHANICAL SHAFT SEAL:	TYPE 6A
CUTTER & PLATE:	440C SS HARDENED TO ROCKWELL C55-60	MOTOR DESIGN LETTER:	NEMA L (1Ph)
PUMP NET WEIGHT:	88 lbs. (39.9 kg)	POWER CORD LENGTH: ft (m)	☐ 25' (7.6 m) ☐ 35' (10.7 m) ☐ 50' (15.2 m)
O-RING & GASKET:	VITON	(20' STANDARD) OPTIONAL:	
MOTOR SHAFT:	416 SS	POWER CORD:	14 GAUGE SOOW
RPM:	3450	STATOR & LEAD WIRES INSULATION:	CLASS B
MOTOR TYPE:	SUBMERSIBLE	MAXIMUM STATOR TEMPERATURE:	266 °F (130 °C)

SHAFT SEAL CONSTRUCTION:	STANDARD	SILICON CARBIDE/CARBON
	OPTIONAL	☐ SILICON CARBIDE/SILICON CARBIDE
MOTOR PROTECTION	INTEGRAL OVERLOAD (1 PH)	
IMPELLER MATERIAL	ENGINEERED PLASTIC	
MAXIMUM WATER TEMPERATURE:	130 °F (54 °C)	
START COMPONENTS: STANDARD INTERNAL	☐ OPTIONAL EXTERNAL (INSTALLED IN EXISTING CONTROL PANEL)	

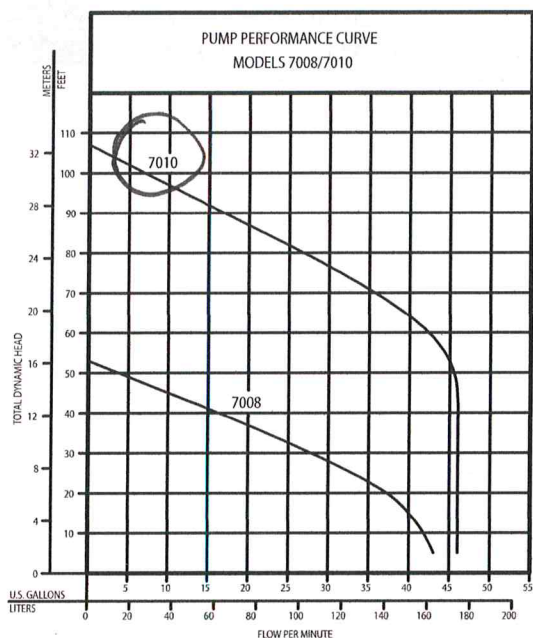
MODEL	HP	SERVICE FACTOR	☐ 115V / 1 PH		☐ 200-230V / 1 PH	
			FLA	LRA	FLA	LRA
7008	1.0	1.2	13.6	46.0	9.9(8.6)*	46.0(57.0)*
7010	2.0	1.2	--	--	14.5(13.7)*	46.0(57.0)*

*DENOTES ELECTRICAL VALUE AT HIGHER VOLTAGE

Zoeller® Engineered Products • 3649 Cane Run Road • Louisville, Kentucky 40211-1961 • (502) 778-2731

SWPA Data Categories Presented -- Data on this sheet supply design information as the minimum recommended by the Submersible Wastewater Pump Association and is defined in accordance with SWPA's Standardized Definitions for Pump and Motor Characteristics. The accuracy of the data is the responsibility of Zoeller Engineered Products.

© Copyright 2024 Zoeller® Co. All rights reserved.



**TOTAL DYNAMIC HEAD/FLOW
PER MINUTE
SEWAGE AND DEWATERING**

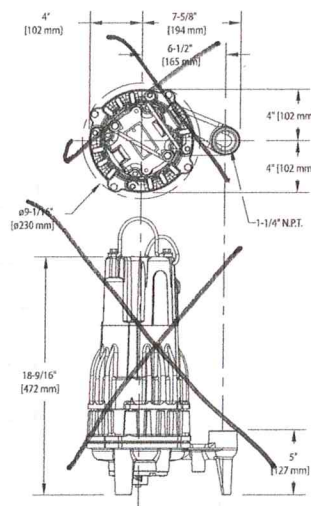
MODEL		7008		7010	
Feet	Meters	Gal.	Liters	Gal.	Liters
5	1.5	43	163	46	174
10	3.0	42	159	46	174
15	4.6	40	151	46	174
20	6.1	37	140	46	174
25	7.6	33	125	46	174
30	9.1	28	106	46	174
35	10.7	22	83	46	174
40	12.2	16.5	62	46	174
50	15.2	-	-	46	174
60	18.3	-	-	43	163
70	21.3	-	-	36	136
80	24.4	-	-	27	102
90	27.4	-	-	16.7	63
100	30.5	-	-	7	26
Shut-off Head:		53 ft. (16.2m)		107 ft. (32.6m)	

154108

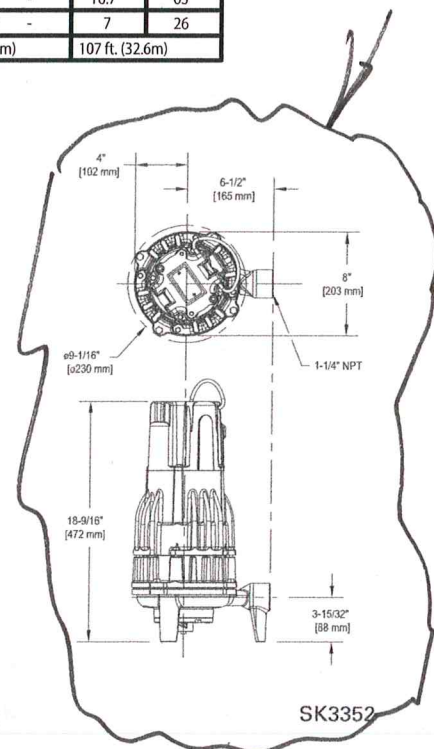
Standard all models - 20 ft. cord - 1 HP				
7008 Models	Control Section			Listed
	Volts	Ph	Amps	cCSAus
WM7008*	115	1	13.6	Yes
N7008	115	1	13.6	Yes
WDH7008*	200-230	1	9.9	Yes
EI7008	200-230	1	9.9	Yes

Standard all models - 20 ft. cord - 2 HP				
7010 Models	Control Section			Listed
	Volts	Ph	Amps	cCSAus
WDH7010*	200 - 230	1	14.5	Yes
EI7010	200 - 230	1	14.5	Yes

*Automatic pump with variable level float switch



SK1621



SK3352

FEATURES

- Durable epoxy coated cast iron construction
- Bearings - upper and lower ball bearing
- Stainless steel motor shaft
- Motor - 1 or 2 HP, 60 Hz, 1750 RPM, 3450 RPM, 1 PH, oil-filled, hermetically sealed, automatic reset thermal overload protected
- Silicon carbide/carbon shaft seal.
- Viton O-ring seals and cover gasket
- Impeller - non-clogging engineered plastic vortex impeller with metal insert
- 20 for UL listed 3-wire SOOW cord. Longer cords available in 25', 35' & 50'.
- Hardened 440C stainless steel cutter and disc, Rockwell C55-60
- 304 SS hardware
- 1.25 NPT Horizontal or Vertical discharge
- 100% computerized tested

Pump Wiring Instructions



▲ WARNING FOR YOUR PROTECTION, ALWAYS DISCONNECT THE PUMP FROM ITS POWER SOURCE BEFORE HANDLING. Single phase automatic pumps are supplied with a 3-prong grounded plug to help protect you against the possibility of electrical shock. **DO NOT UNDER ANY CIRCUMSTANCES REMOVE THE GROUND PIN.** The 3-prong plug must be inserted into a mating 3-prong grounded receptacle. If the installation does not have such a receptacle, it must be wired and grounded in accordance with the National Electrical Code and all applicable local codes and ordinances.



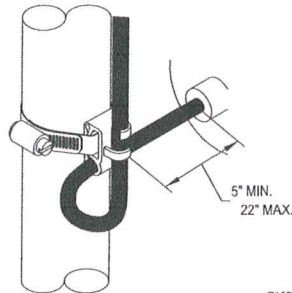
▲ WARNING "Risk of electrical shock" Do not remove the power supply cord and strain relief or connect conduit directly to pump.
▲ WARNING Installation and checking of electrical circuits and hardware should be performed by a qualified licensed electrician.

FIGURE 4.

Determining Pumping Range in Inches (1 inch - 2.5 cm)

Tether Length	5	10	15	20	22
	min.				max.
Pumping Range	9	13.5	18	22	24

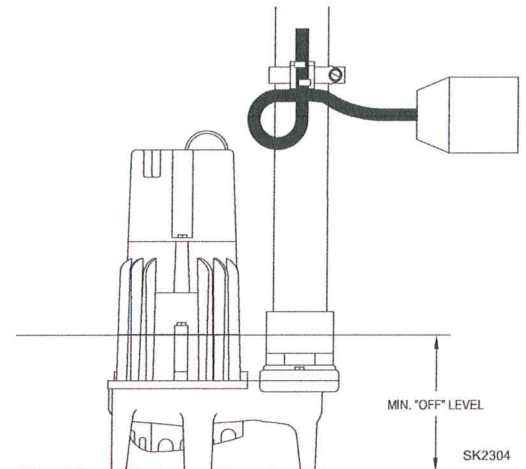
Use only as a guide. Due to weight of cable, pumping range above horizontal is not equal to pumping range below horizontal. Ranges are based on testing in nonturbulent conditions. Range may vary due to water temperature and cord shape. As tether length increases, so does the variance of the pumping range.



20 AMP SWITCH (WD & WH MODELS)

Note: Failure to keep within proper tether limits may prevent reliable switch operation.

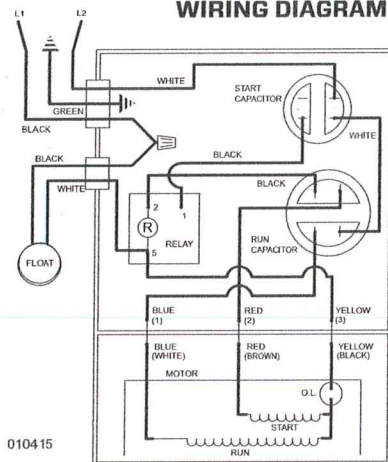
Note: Cable must be mounted in horizontal position.



Models WD & WH are fully automatic. A float switch is included and factory wired in the pump circuit to provide automatic operation once the float switch is secured properly to the outlet pipe. Use the diagram above to secure the float switch properly and obtain the proper tether to customize the on-off cycle to each application. Note the minimum off level shown above. On Prepackaged Systems, the tether length is set at 5".

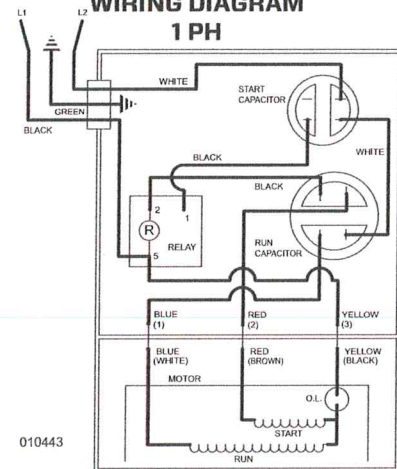
FIGURE 5.

AUTOMATIC WIRING DIAGRAM



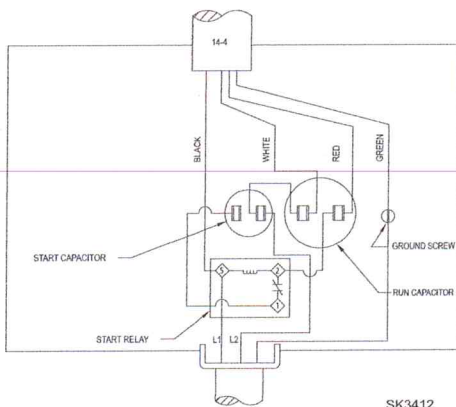
010415

NONAUTOMATIC WIRING DIAGRAM 1 PH



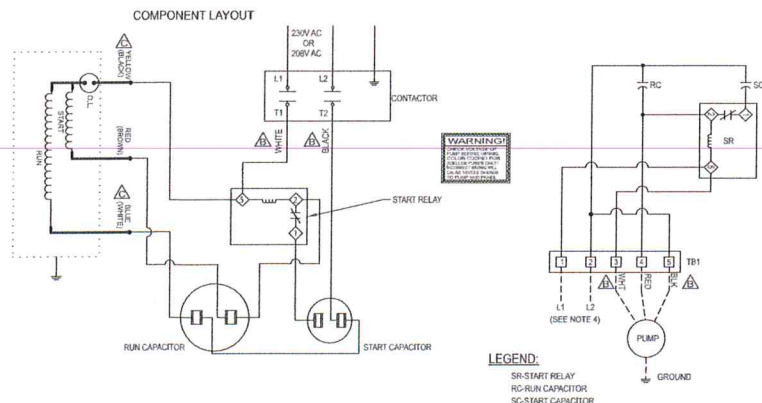
010443

LEAD IDENTIFICATION



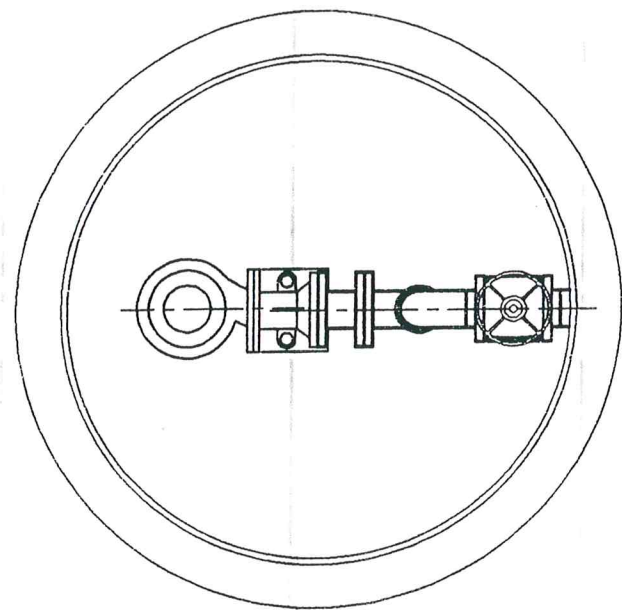
SK3412

NONAUTOMATIC WIRING DIAGRAM 1 PH w/REMOTE START COMPONENTS



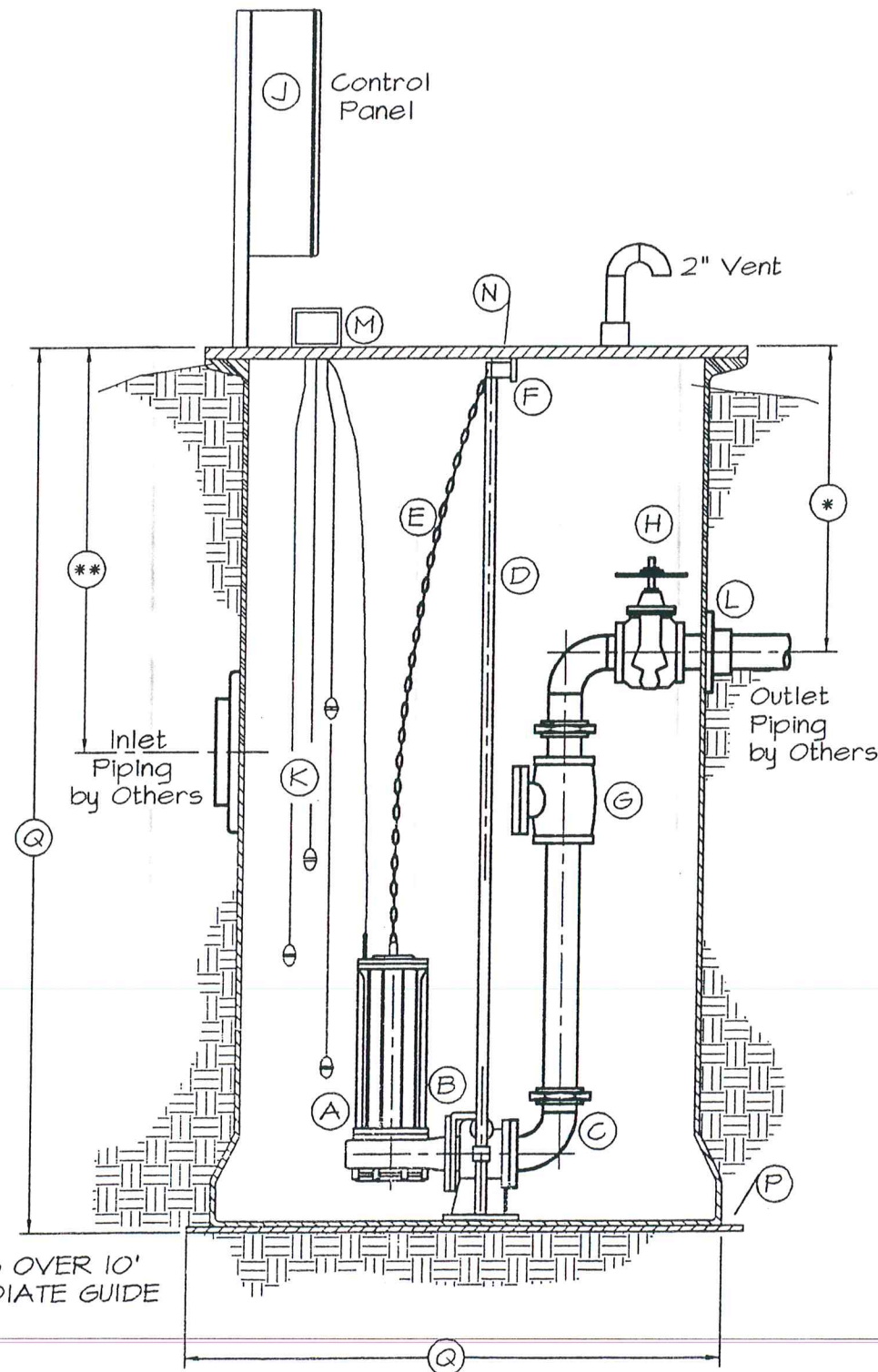
LEGEND:
 SR-START RELAY
 RC-RUN CAPACITOR
 SC-START CAPACITOR

158390



SIMPLEX ARRANGEMENT

NOTE: WET WELL DEPTHS OVER 10'
DEEP REQUIRE INTERMEDIATE GUIDE
RAIL BRACING.



ELEVATION THRU BASIN

- A 2HP Barracuda Grinder Pump Model E1710
- B Coupling Flange w/ Guide Claws
- C Auto coupling
- D Slide Rails ~~Galv~~ or SS
- E Lifting Chain or Cable
- F Slide Rail Upper Bracket
- G 2" Ball Check Valve
- H 2" Gate Valve
- J Control Box
- K Level Switches
- L Discharge Connection 2"
- M NEMA 4 Junction/Pull Box
- N Alum Steel Cover Plate 42" D.P.
- P Anti floatation Flange
- Q Fiberglass Retention Basin 36" ϕ x 60" Deep

Motor Data - (I) Req'd

HP 2 ϕ 1

V 230

Pump Size & Model E1710

Pump Data

20 GPM ____ TDH

* Need this dimension before fabrication can begin

** Shipped loose, installed by Contractor

PUMPS & POWER CO

PUMP-R-PAK

TYPE 'GP'

SUBMERSIBLE SEWAGE
GRINDER PUMP STATION