

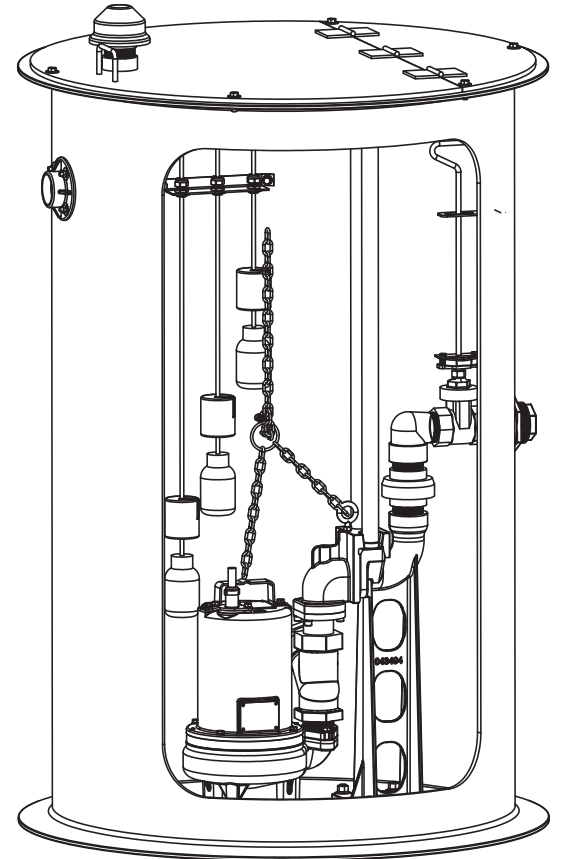
PS-027

Pre-Packaged Fiberglass Systems

Specifications:

inches
(mm)

| | |
|---|--|
| BASIN | Fiberglass w/ 3" (76) Ballast Support Flange |
| DISCHARGE | Polypropylene |
| Size | 1¼", 2", or 3" NPT, Female |
| INLET | 4" (102) Fiber Insert Hub (For Field Installation) |
| COVER: | |
| <i>Fiberglass</i> | 24" (610) thru 36" (914) Basins. |
| <i>Aluminum</i> | 36" Dia. Alum. ¾ Hatch with Stainless Steel Hinges and Hardware (Frogmouth) |
| VENT | 2" Bug Free |
| RAIL SYSTEM | 1" SCH40 Stainless Steel |
| BASE ELBOW FITTING: | |
| <i>Stationary</i> | Cast Iron |
| <i>Mounting</i> | Bolted to bottom of basin |
| VALVE: | |
| <i>Material</i> | Gate PVC (1¼", 2") Ball-PP (3") |
| <i>Size</i> | 1¼", 2", or 3" NPT |
| SWING CHECK VALVE ON 3" UNITS | |
| <i>Material</i> | BR |
| <i>Size</i> | 3" |
| ELECTRICAL | 2" NPT Conduit Hub Qty (1) (For Field Installation) |
| EXTENSION HANDLE | 3/8" Dia. (9.5) Stainless Steel (For Units 60" and Deeper) |
| LIFTING DEVICE | Stainless Steel Chain |
| HARDWARE | 300 Series Stainless Steel |
| DISCHARGE PIPING | SCH80 PVC/PP |
| LEVEL CONTROLS: | |
| <i>Floats</i> | Quantity of three mechanical level controls, with N.O. contacts polypropylene housings with 18-2, SJOW cord with adjustable float weights, suspended from stainless steel float rack |
| MOVABLE SUB-ASSEMBLY: (For field installation) | |
| <i>Discharge Piping</i> | Stainless Steel |
| <i>Ball Check Valve</i> | Included on 1¼" and 2" units |
| <i>Material</i> | CI |



Simplex Fiberglass Lift Station: Rail Pipe

1¼" NPT Discharge, or
2" NPT Discharge, or
3" NPT Discharge



Pre-Packaged Fiberglass Systems

PS-028

1. Diameter

- 24" (.6m)
- 30" (.8m)
- 36" (.9m)

2. Depth

- 48" (1.2m)
- 60" (1.5m)
- 72" (1.8m)
- 84" (2.1m)
- 96" (2.4m)

3. Level Control

- Individual Suspended Floats

4. Cover Type

Cover Restrictions:

- 24" (.6m) Solid Fiberglass
- 30" (.8m) Solid Fiberglass
- 36" (.9m) Solid Fiberglass
- 36" (.9m) Aluminum 3/4 Hatch

5. Sensor Options

Sensor Restrictions:

a.) PGPP & PGPH **CANNOT** Use Moisture Sensors.

- Temperature Only

6. Inlet Type

- 4" (102mm) SCH 40/80 Fiberglass
Inlet Hub

7. Lifting Device

- Stainless Steel Chain

8. Pump (OPTIONAL)

- See online ePump configurator to build a station with or without a pump

9. Panel (OPTIONAL)

- See online ePump configurator to build a station with or without a panel

NOTE: Pump and panel are shipped loose when configured with station.

Specifications

Simplex Fiberglass Lift Station: Rail Pipe

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Pre-Packaged Fiberglass Systems

FILE: SPEC40B

DESCRIPTION: The manufacturer shall furnish a complete Pump Station(s). The pump station shall consist of a basin package, pump and control panel.

- The Basin Package shall include the following: fiberglass basin with anti-floitation collar, BAF lift out system with stainless steel guide rails, isolation valve, mechanical floats, basin cover, check valve, stainless lifting chain, field locatable conduit fitting, and bug free station vent. All equipment in the wet well shall be capable of constant submerge in sewage to a minimum depth of 30 feet without electrical power being energized.
- The Control Panel (optional) shall include a NEMA 4X weather tight thermoplastic enclosure with removable mounting flanges. The panel shall have indicators showing pump run, float status, and control/alarm power indicators. The high level alarm shall consist of a horn for audio warning, as well as a top mounted red beacon. The interior of the panel shall consist of magnetic motor contactors, a circuit breaker, a terminal block for customer connection of power, pump leads, and level switches, and hand-off-automatic switches are provided for manual operation of the pump.
- The Pump (optional) shall include a Barnes Grinder, Effluent, or Sewage Ejector, and shall be selected based on the hydraulic requirements of the system.

SHOP DRAWINGS AND MANUALS: After receipt of notice to proceed, the manufacturer shall furnish the engineer a minimum of eight (8) sets of shop drawings detailing the equipment to be furnished including dimensional data and materials of construction. The engineer shall promptly review this data, and return two (2) copies to the manufacturer as approved, or approved as noted. Upon receipt of accepted shop drawings, the manufacturer shall proceed with order entry and fabrication of the equipment. Prior to completion of equipment delivery, the manufacturer shall supply four (4) copies of Operation and Maintenance Manuals to the owner, and one (1) copy of the same to the engineer.

PRE-APPROVAL OF MANUFACTURER: The system design is detailed in the drawings. Any pump manufacturer not specified, but wishing to be pre-approved as an acceptable supplier shall submit a complete hydraulic analysis based on the design detailed in the drawings at least fifteen days prior to bid date. All manufacturers must have been in the business of manufacturing complete pump stations for a minimum of ten years. Manufacturer Representatives, Distributors, or Packagers will not be considered to be manufacturers. Manufacturer must demonstrate to the satisfaction of engineer that the proposed pump equipment will meet system flows and heads required. In addition, pre-submittal must also demonstrate to the satisfaction of the engineer that the equipment being proposed meets or exceeds all performance and safety requirements, materials of construction, and user benefits of the specified equipment. Only pre-approved pump station manufacturers will be considered. All bids utilizing manufacturers not pre-approved will be considered non-responsive.

ACCEPTABLE MANUFACTURER(S): Acceptable pump station manufacturer(s) are Barnes pumps as manufactured by Crane Pumps & Systems., or pre-approved equal.

CORROSION PROTECTION: All materials exposed to wastewater shall have inherent corrosion protection: i.e., painted cast iron, fiberglass, stainless steel, PVC.

STATION CONFIGURATION: Basins shall be supplied in a wet well configuration.

LEVEL DETECTION: Level detection for controlling the pump and alarm operation shall be accomplished by use of a detection mechanism specifically designed for use in a sewage system and shall be removable without the need to remove the pump. Switches utilized in the system shall be hermetically sealed in a submersible, watertight protective casing. Level detection mechanism shall be suspended mechanical floats with adjustable weights for sight specific settings to provide switch protection from solids,

greases, oils, and fats. Level detection mechanism shall not require any regular, preventive maintenance. The level detection mechanism shall consist of three switches, one for each function (HIGH WATER ALARM, PUMP ON, PUMP OFF). The level controls shall be serviceable without the need for a confined space entry as defined by OSHA or the need to remove the pump. Use of mercury floats will not be acceptable.

SHUT-OFF VALVE: The pump discharge shall be equipped with a factory installed, manual valve with separate union. Valves shall be, constructed of (Gate PVC(1-1/4" and 2") Ball-PP (3")) , with a minimum rated pressure of 150 PSI (10.6 kgs/sq. meter). All valves shall be operable from ground level. Shut off valve must be replaceable without excavating basin exterior. Shut off valves shall be each equal to the size of the station discharge.

BASIN CONSTRUCTION AND ASSEMBLY: The basin shall be fiberglass reinforced polyester resin with a 3" (76.2 mm) ballast support flange. The basin shall be furnished with one flexible inlet flange (shipped loose to facilitate field location) to accept a 4.50" (114 mm) OD DWV pipe. Inlet location can vary to accommodate ease of installation. (See installation instructions or consult factory for details.) Basin capacities and dimensions shall be as shown on the contract drawings or as specified herein. The basin FRP wall laminate thickness shall vary with the wetwell depth to provide the aggregate strength to meet the tensile and flexural physical property requirements. The basin FRP wall laminate must be designed to withstand wall collapse or buckling based on a hydrostatic pressure of pounds per square foot, a saturated soil weight of 120 pounds per cubic foot, a soil modulus of 700 pounds per square foot. Basin must comply with the pipe stiffness values as specified in ASTM D 3753. The basin laminate must be constructed to withstand or exceed 150% of the assumed loading on any depth. The finished FRP laminate will have a Barcol hardness of at least 90% of the resin manufactures specified hardness for the fully cured resin. The Barcol Hardness shall be the same for both interior and exterior surfaces. Manufacture must submit documentation including calculation and production certification that basin (s) on the project are in compliance with the above requirements.

All piping inside the basin silhouette shall be at a level in the station that is lower than the frost depth or depth of bury specified for the low pressure sewer piping, whichever is lowest.

Fiberglass cover shall be grass green color. Steel cover shall be black in color. Aluminum cover shall be natural silver color.

All discharge piping shall be constructed of Schedule 80 PVC and terminate outside the stations with a bulkhead female NPT fitting. The manufacturer shall guarantee all bulkhead penetrations watertight.

PUMP REMOVAL SYSTEM: Each basin shall be equipped with a 300 series stainless steel pipe guide rail assembly to facilitate removal of the pump(s) from ground level. A stainless steel lifting chain with harness shall be supplied for pump removal. Pump removal system must not require the loosening of fasteners to facilitate pump removal, and shall provide for automatic alignment and re-connection of discharge piping for the replacement pump. Pump replacement shall be accomplished while the basin is full of sewage without the need to dewater the basin.

WARRANTY: The manufacturer shall provide a warranty of twenty-four (24) months after date of manufacture. The owner will return any equipment found to be defective to the manufacturer for inspection and validation of the defect. Defective equipment will be repaired or replaced and shipped back to customer at no charge. Consult factory for extended warranty information.

End

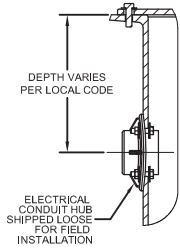
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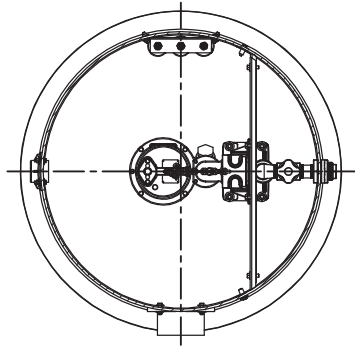
A Crane Co. Company

PUMPS & SYSTEMS

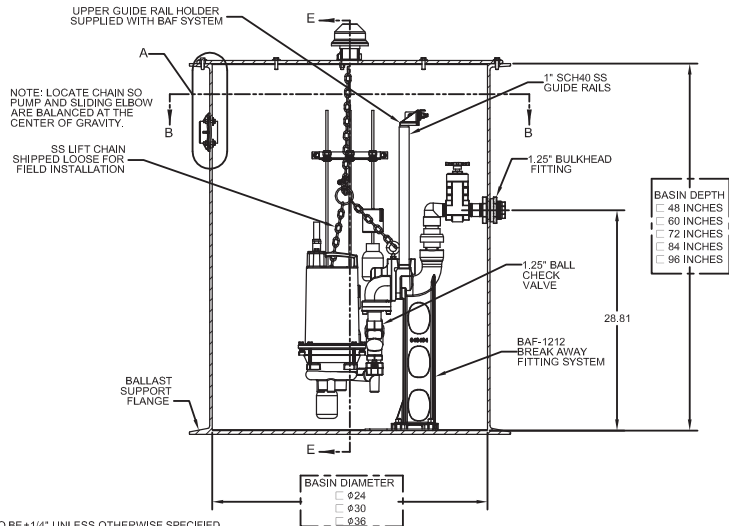
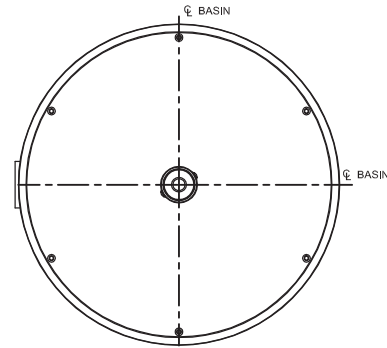
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DETAIL A
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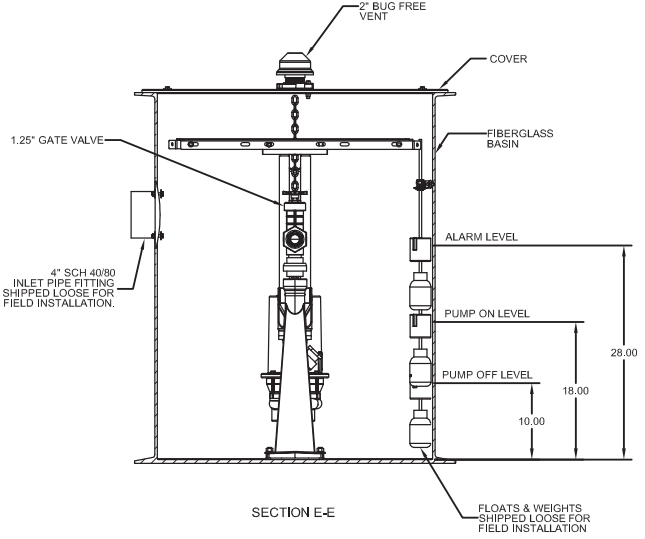


SECTION B-B

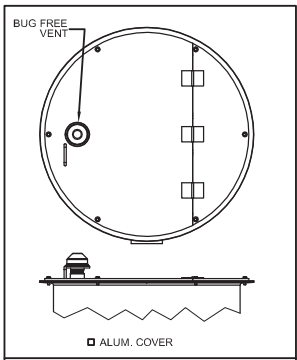


- BASIN DEPTH
- 48 INCHES
 - 60 INCHES
 - 72 INCHES
 - 84 INCHES
 - 96 INCHES

- BASIN DIAMETER
- 24
 - 30
 - 36

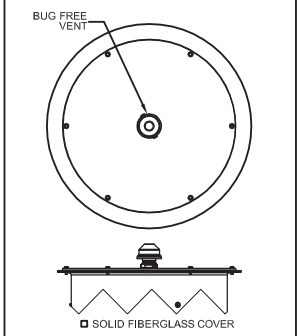


SECTION E-E



□ ALUM. COVER

AVAILABLE ON 36" DIAMETER ONLY



□ SOLID FIBERGLASS COVER

AVAILABLE ON 24", 30" & 36" DIAMETER

- NOTES
1. ALL DIMENSIONS TO BE ±1/4" UNLESS OTHERWISE SPECIFIED.
 2. CONSULT FACTORY FOR OTHER DEPTHS.
 3. LEVEL CONTROLS MUST BE INSTALLED OUT OF THE INFLUENT FLOW TO AVOID TURBULENCE.
 4. ELECTRICAL CONDUIT & FITTINGS TO BE INSTALLED ACCORDING TO STATE AND LOCAL CODES.

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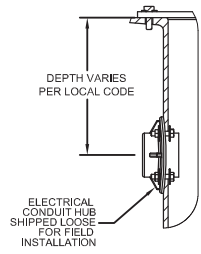
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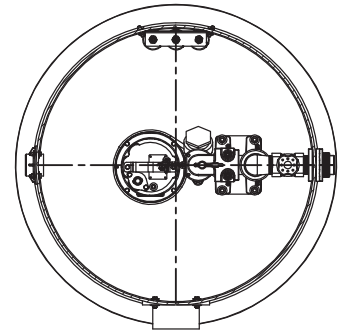
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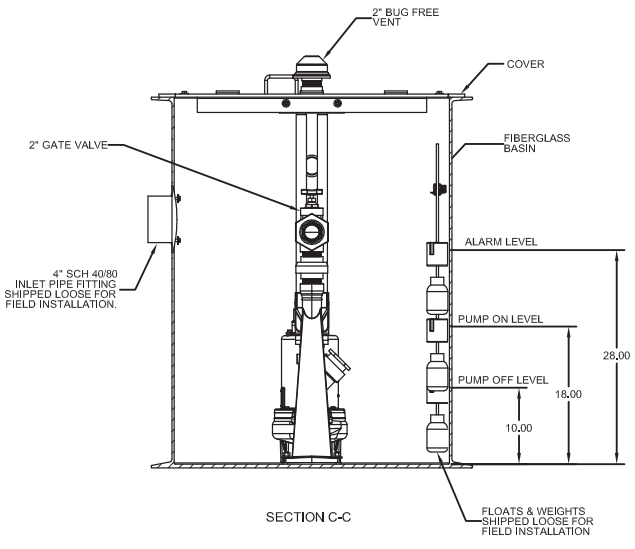
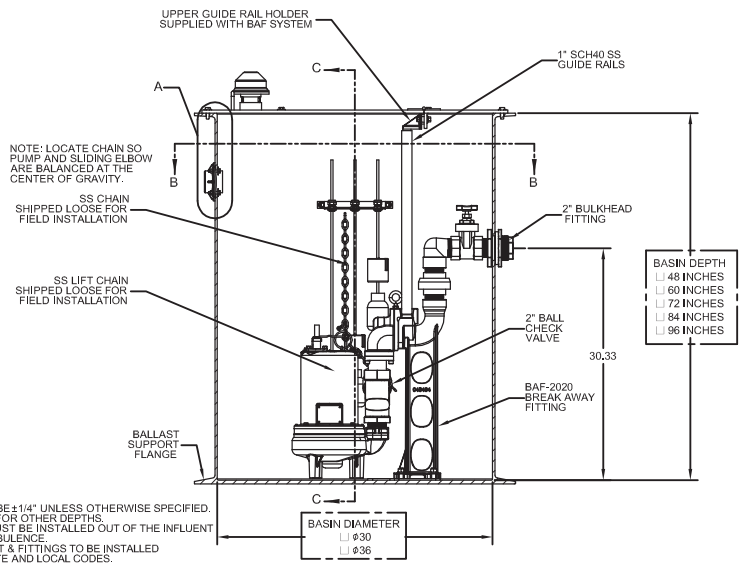
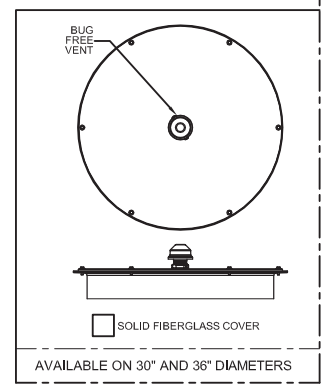
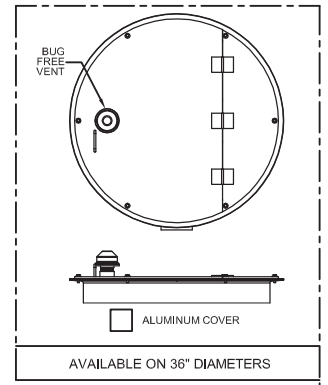
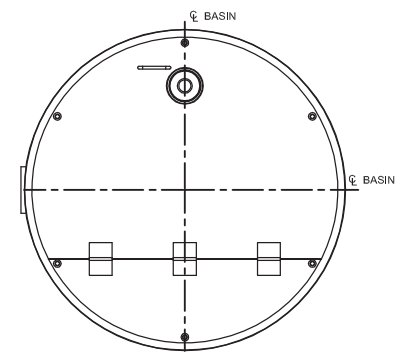
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DETAIL A
SCALE 1:4



SECTION B-B



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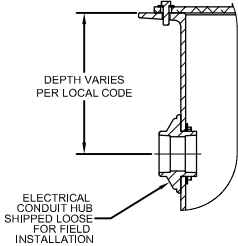
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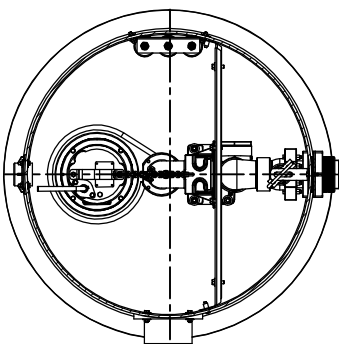
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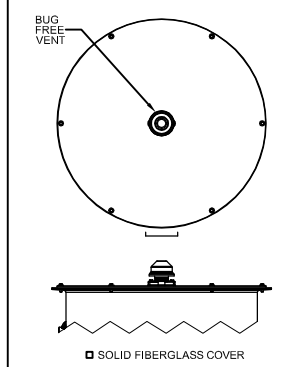
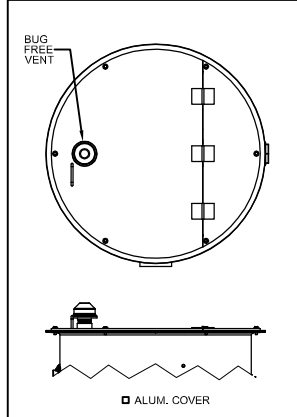
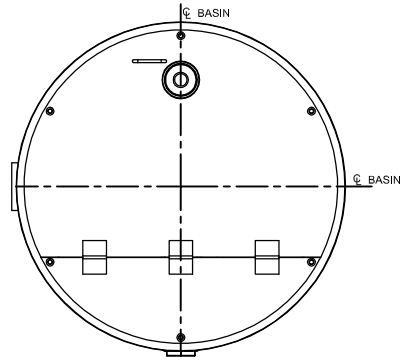
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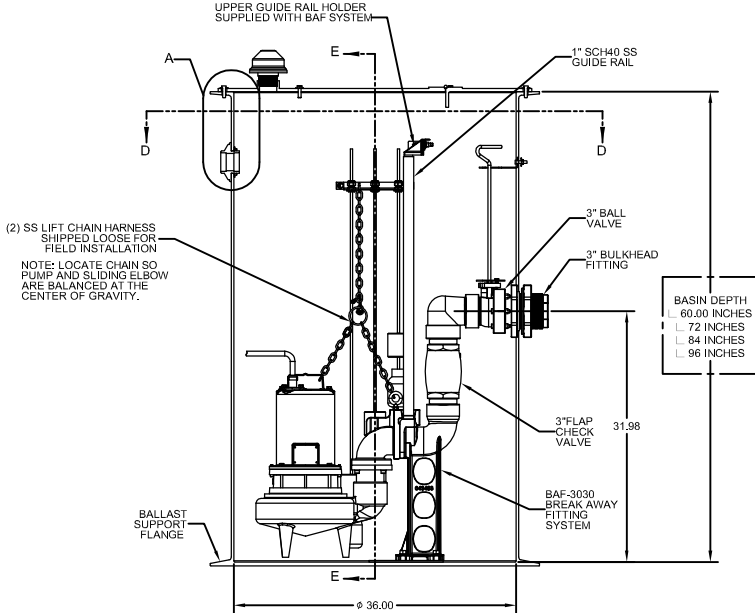
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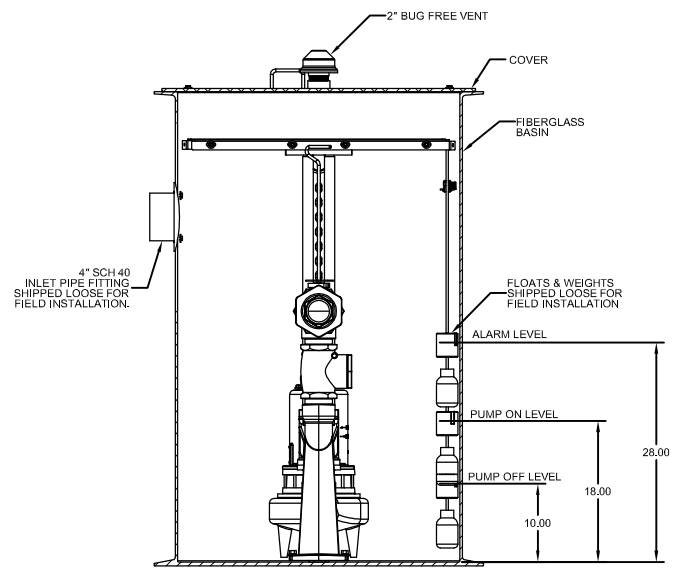
SECTION D-D



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| | | |
|-------------|---|--------------|
| BASIN DEPTH | L | 60.00 INCHES |
| | L | 72 INCHES |
| | L | 84 INCHES |
| | L | 96 INCHES |



SECTION E-E

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