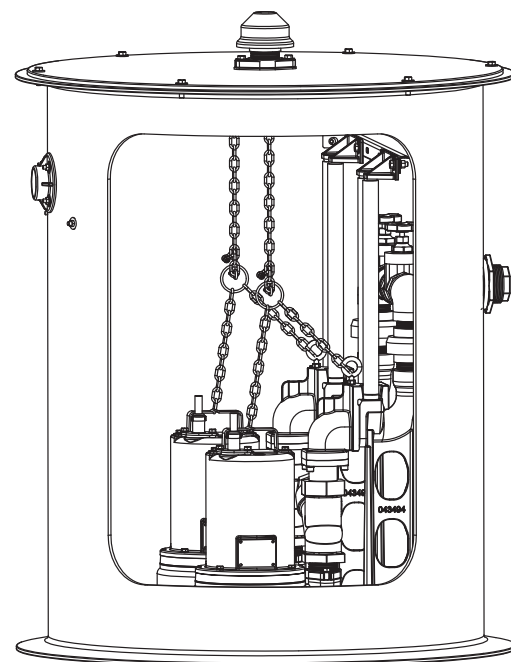


Pre-Packaged Fiberglass Systems

Specifications:

inches
(mm)

BASIN	Fiberglass w/ 3" (76) Ballast Support Flange
DISCHARGE	Polypropylene
Size	1¼", 2", or 3" NPT, Female
INLET	4" (102) Fiberglass Inlet Hub, (For Field Installation)
COVER:	
Steel	48" Dia. Black Powder Coated, with 2" (51) Bug-Free Vent, Lockable Hinged Access Door and Stainless Steel Hinges and Hardware
Aluminum	48" Dia. with 2" Bug-Free Vent, Lockable Hinged Access Door and Stainless Steel Hinges and Hardware
Aluminum	36" Dia. Alum. 3/4 Hatch with Stainless Steel Hinges and Hardware (Frogmouth)
Fiberglass	One piece, Grass Green with 2" (51) Bug-Free Vent. 36" Dia. Basins Only
RAIL SYSTEM	1" SCH40 Stainless Steel
BASE ELBOW FITTING:	
Stationary	Cast Iron
Mounting	Bolted to bottom of basin
VALVE:	
Material	Gate-PVC (1¼", 2") Ball-PP (3")
Size	1¼", 2", or 3" NPT
SWING CHECK VALVE ON 3" UNITS:	
Material	BR
Size	3"
ELECTRICAL	2" NPT Conduit Hub Qty (2) (For Field Installation)
EXTENSION HANDLE	3/8" Dia. (9.5) Stainless Steel (For Units 60" + Deeper)
LIFTING DEVICE	Stainless Steel Chain
HARDWARE	300 Series Stainless Steel
DISCHARGE PIPING	SCH80 PVC/PP
LEVEL CONTROLS:	
Floats	Quantity of four 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)
Discharge Piping	Stainless Steel
Ball Check Valve	Included on 1¼" and 2" units
Material	CI



Duplex Fiberglass Lift Station: Rail Pipe

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



WARNING:
CANCER AND REPRODUCTIVE HARM -
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Pre-Packaged Fiberglass Systems

1. Diameter

- ☐ 36" (.9m)
- ☐ 48" (1.2m)

2. Depth

- ☐ 48" (1.2m)(1-1/4" and 2" Discharge ONLY)
- ☐ 60" (1.5m)
- ☐ 72" (1.8m)
- ☐ 84" (2.1m)
- ☐ 96" (2.4m)

3. Level Control

- ☐ Individual Suspended Floats

4. Cover Type

Cover Restrictions:

- ☐ 36" (.9m) Solid Fiberglass
- ☐ 36" (.9m) Aluminum 3/4 Hatch
- ☐ 48" (1.2m) Steel
- ☐ 48" (1.2m) Aluminum Hatch

5. Sensor Options

Sensor Restrictions:

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

- ☐ Temperature Only
- ☐ Moisture and Temperature

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.

FILE: SPEC40C

Pre-Packaged Fiberglass Systems

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-flotation 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 alternating action that equalizes pump wear. In addition to the alternating pump control, this system provides override control should either pump fail. 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, circuit breakers, terminal blocks for customer connection of power, pump leads, and level switches, and hand-off-automatic switches are provided for manual operation of the pumps.
- 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 four (Duplex) switches, one for each function (HIGH WATER ALARM, LEAD PUMP ON, LAG PUMP ON, ALL PUMPS 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.

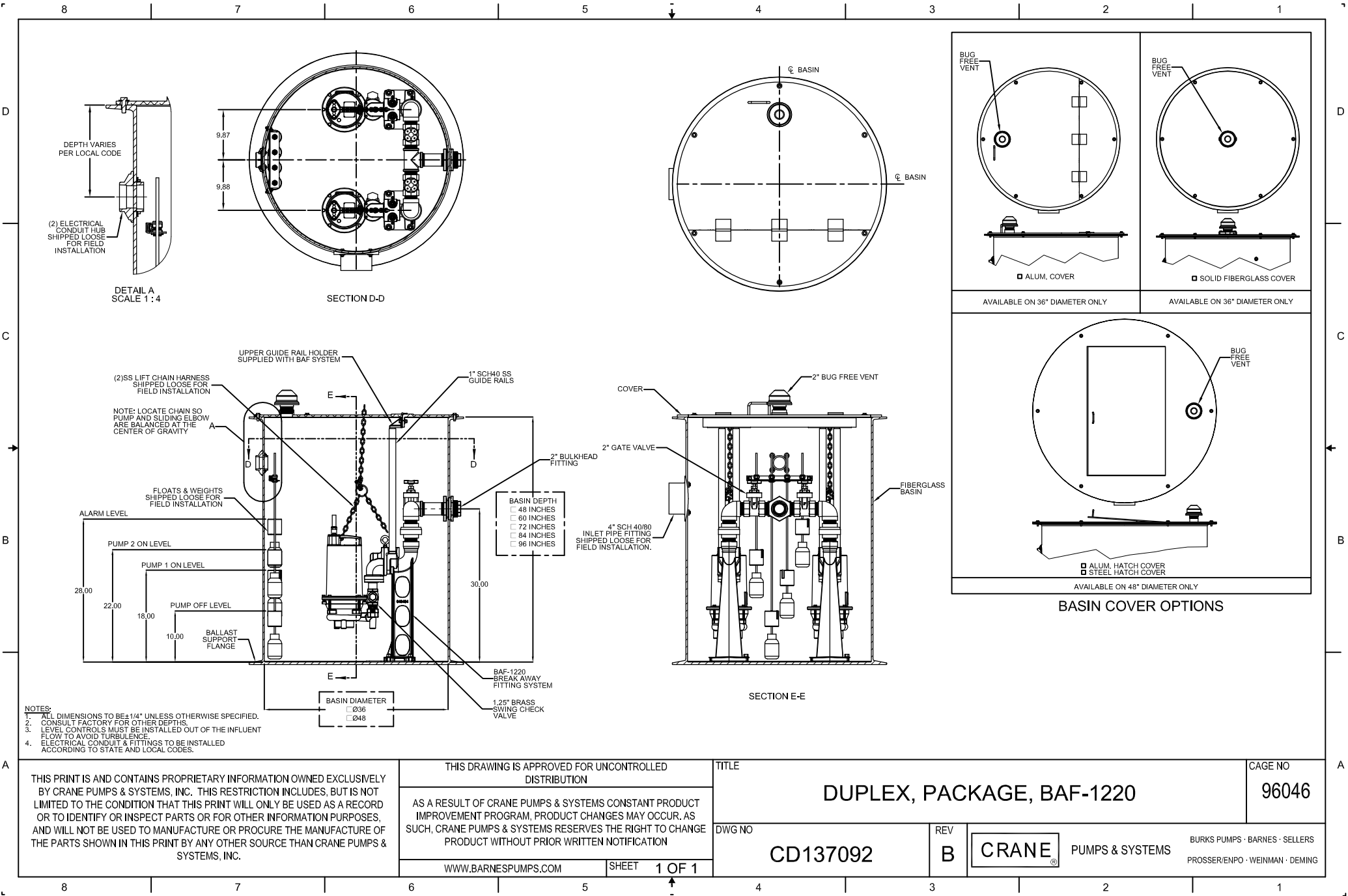
Fiberglass cover shall be grass green color. Steel cover shall be black in color. Aluminum cover shall be natural silver color.

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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