Specifications:

**BASIN**
- Fiberglass w/ 3” (76) Ballast Support Flange

**DISCHARGE**
- Stainless Steel
  - Size: 1 1/2” or 2 1/2” NPT, Female

**INLET**
- 4” (102) Flexible Inlet Flange,
  (For Field Installation)

**COVER:**
- **Steel**
  - Black Powder Coated, w/2” (51) Bug-Free Vent, Lockable Hinged Access Door and Stainless Steel Hinges and Hardware
- **Aluminum**
  - Aluminum, w/2” NPT Bug-Free Vent, Lockable Hinged Access Door and Stainless Steel Hinges and Hardware
- **Fiberglass**
  - One piece, Grass Green with 2” (51) Bug-Free Vent, 36” (0.9m) & 42” (1.1m) Dia. Basins Only

**RAIL SYSTEM**
- Qty. 2, 300 Series Stainless Steel “C” Channel

**STATIONARY DISCHARGE FITTING:** (Quantity of Two)
- **Stationary**
  - Powder Coated Cast Iron
- **Diaphragm**
  - Fiber Reinforced Neoprene

**JUNCTION BOX**
- NEMA 6 with cord grips for incoming cords

**ELECTRICAL**
- Cord grips for Direct Burial Cable
  (For Field Installation)

**BALL VALVE:** (Quantity of Two)
- **Material**
  - PVC
- **Size**
  - 1 1/4” & 2” NPT

**EXTENSION HANDLE**
- Qty. Two, 3/8” Dia. (9.5) Stainless Steel

**LIFTING ROPE**
- Qty. Two, 1/2” Dia. (13) Polypropylene with Knots in 12” (305) increments. Breaking Strength of 3750 lbs. (1701kg)

**HARDWARE**
- 300 Series Stainless Steel

**DISCHARGE PIPING**
- 300 Series Stainless Steel

**LEVEL CONTROLS:**
- **FloatTREE**
  - Quantity of four Mercury Level Controls potted together and terminating into one 8 conductor color coded cord, mounted on PVC pipe
- **Floats**
  - Quantity of four Separate Mercury Level Controls, Polypropylene housings with 18-2, SJOW cord, mounted on PVC pipe
- **ESPS**
  - Environmentally sealed pressure switch with CPVC housing, HNBR diaphragm, Custom molded quick connect for sealing and strain relief

**MOVABLE SUB-ASSEMBLY:** (Two Required, Ordered with Pump)
- **FLAPPER/ANTI-SIPHON CHECK VALVE:**
  - **Housing**
    - Cast Iron, powder coated with integrated anti-siphon
  - **Flapper**
    - Fiber reinforce Nitrile

**PUMP BRACKETS**
- 300 Series Stainless Steel

**DISCHARGE PIPING**
- Stainless Steel

**OPTIONS**
- 4” (102) SCH 40 or SDR35 or 6” (152) SCH 40 Flexible Inlet Flange or Cast Iron Inlet Hubs, Stainless Steel Flexible Discharge Connector, Basin Depths, Stainless Steel Cable, Chain, Conduit Hubs, Aluminum Cover, Fiberglass Cover for 36” (914) Dia.

**Series:** DSRS and LDSRS

1 1/2” NPT Discharge or 2 1/2” NPT Discharge

For use with OGP, OGVF, OGVH, SGV pumps

Sample Specification: Section 3E pages 11 & 12 - Steel Cover
pages 13 & 14 - Aluminum Cover

**WARNING:**
CANCER AND REPRODUCTIVE HARM - WWW.P65WARNINGS.CA.GOV
# Pre-Packaged Fiberglass Systems

## 1. Diameter

**Basin Restrictions:**

a) 3, 5 and 7.5HP SGV pumps can **NOT** be used in 36” (.9m) diameter basins.

<table>
<thead>
<tr>
<th>Diameter</th>
<th>Restrictions</th>
</tr>
</thead>
<tbody>
<tr>
<td>36” (.9m)</td>
<td>3, 5 and 7.5HP SGV pumps <strong>NOT</strong></td>
</tr>
<tr>
<td>42” (1.1m)</td>
<td></td>
</tr>
<tr>
<td>48” (1.2m)</td>
<td></td>
</tr>
<tr>
<td>60” (1.5m)</td>
<td></td>
</tr>
</tbody>
</table>

## 2. Depth

<table>
<thead>
<tr>
<th>Depth</th>
<th>Restrictions</th>
</tr>
</thead>
<tbody>
<tr>
<td>48” (1.2m)</td>
<td></td>
</tr>
<tr>
<td>60” (1.5m)</td>
<td></td>
</tr>
<tr>
<td>72” (1.8m)</td>
<td></td>
</tr>
<tr>
<td>84” (2.1m)</td>
<td></td>
</tr>
<tr>
<td>90” (2.3m)</td>
<td></td>
</tr>
<tr>
<td>96” (2.4m)</td>
<td></td>
</tr>
<tr>
<td>108” (2.7m)</td>
<td></td>
</tr>
<tr>
<td>120” (3m)</td>
<td></td>
</tr>
<tr>
<td>132” (3.4m)</td>
<td></td>
</tr>
<tr>
<td>144” (3.7m)</td>
<td></td>
</tr>
</tbody>
</table>

## 3. Level Control

- FloatTREE
- Individual Floats
- ESPS-200

## 4. Cover Type

**Cover Restrictions:**

a) 36” (.9m) and 42” (1.1m) Diameter Steel and Aluminum covers are available in ¼ Split (Frogmouth) Style Only.

b) 48” (1.2m) and 60” (1.5m) Diameter Steel and Aluminum covers are available in hatch style ONLY.

c) Fiberglass cover available for 36” (.9m) & 42” (1.1m) ONLY.

<table>
<thead>
<tr>
<th>Cover Type</th>
<th>Available</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fiberglass</td>
<td>Steel</td>
</tr>
<tr>
<td>Aluminum</td>
<td></td>
</tr>
</tbody>
</table>

## 5. Pump Type

- 2 HP OGP
- 2 HP OGVF
- 2 HP SGVF
- 3 HP SGV
- 7.5 HP SGV

## 6. Pump Voltage and Phase

**Voltage & Phase Restrictions:**

a) OGV & OGP Are **ONLY** available in 240 Volt 1 Phase.

b) 7.5 HP SGV is **ONLY** available in 240, 480 & 600 volt 3 Phase.

<table>
<thead>
<tr>
<th>Voltage</th>
<th>Phase</th>
</tr>
</thead>
<tbody>
<tr>
<td>200 Volt</td>
<td>/ 1 Phase</td>
</tr>
<tr>
<td>240 Volt</td>
<td>/ 1 Phase</td>
</tr>
<tr>
<td>200 Volt</td>
<td>/ 3 Phase</td>
</tr>
<tr>
<td>240 Volt</td>
<td>/ 3 Phase</td>
</tr>
<tr>
<td>480 Volt</td>
<td>/ 3 Phase</td>
</tr>
<tr>
<td>600 Volt</td>
<td>/ 3 Phase</td>
</tr>
</tbody>
</table>

## 7. Sensor Options

**Sensor Restrictions:**

a) OGV & OGP **CANNOT** Use Moisture Sensors.

<table>
<thead>
<tr>
<th>Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temperature Only</td>
</tr>
<tr>
<td>Moisture and Temperature</td>
</tr>
<tr>
<td>Closed Valve Protection</td>
</tr>
<tr>
<td>and Temperature</td>
</tr>
</tbody>
</table>

## 8. Inlet Type

**Inlet Restrictions:** 6” (152mm) and 8” (205mm) Inlet Fittings and Hubs are **NOT** available with 24” (.6m), 30” (.8m) Reduced and 30” (.8m) Diameter Basins.

- 4” (102mm) SDR 35 Flexible Fitting
- 4” (102mm) Schedule 40 Flexible Fitting
- 6” (152mm) Schedule 40 Flexible Fitting
- 4” (102mm) Cast Iron Caulking Hub
- 6” (152mm) Cast Iron Caulking Hub
- 8” (205mm) Cast Iron Caulking Hub

## 9. Lifting Device

- Polypropylene Rope
- Stainless Steel Cable
- Stainless Steel Chain

## 10. Lock Options

- None
- Cover Only
- Panel Only
- Cover and Panel

**General Notes:**

1. C-Channel Guide Rail is designed to support pump approximately 4” (102 mm) from the bottom of basin.

2. Moveable Portion of “BAF” , piping, check valve and pump brackets will be shipped on pump.

3. System **DOES NOT** include pumps or panel. **MUST** be ordered separately.

4. Other Diameters, Depths and Options Available. Consult Factory for Details.

5. Basins for 2 HP pumps will have a 1½” (38mm) Female NPT discharge Connection. Basins for 3, 5, 7.5 HP will have a 2½” (64mm) Female NPT Discharge connection.

6. Other 1¼” or 2” pump types available, Consult Factory for details.
DESCRIPTION: The manufacturer shall furnish complete factory-built and tested Grinder Pump Station(s), each consisting of a basin package, control panel, alarm device, unitized level control system, grinder pump and all necessary appurtenances to form a complete U.L. listed package system. Grinder pump shall be listed to U.L. 778 and CSA 108, basin package shall be listed to U.L. 1951, and control panel shall be listed to U.L. 508. All equipment in the wet well shall be capable of constant operation. The package shall be listed to U.L. 1951, and control panel shall be listed to U.L. 1951. As evidence of compliance with this requirement, the completely assembled, fire hazards as required in a residential environment. As evidence of compliance with this requirement, the completely assembled, fire hazards as required in a residential environment. As evidence of compliance with this requirement, the completely assembled, fire hazards as required in a residential environment. As evidence of compliance with this requirement, the completely assembled, fire hazards as required in a residential environment. As evidence of compliance with this requirement, the completely assembled, fire hazards as required in a residential environment. As evidence of compliance with this requirement, the completely assembled, fire hazards as required in a residential environment.

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 grinder pump stations for a minimum of five 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 grinder pump station manufacturers will be considered. All bids utilizing manufacturers not pre-approved will be considered non-responsive.

WARRANTY: The manufacturer shall provide a warranty on any defective part(s) and labor to replace defective parts for a period of twelve (12) months after notice of owner's acceptance, but no greater than twenty-four (24) months after receipt of shipment. 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.

ACCEPTABLE MANUFACTURER(S): Acceptable grinder pump station manufacturer(s) are Barnes Pumps 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.

SAFETY: The Grinder Pump Station shall be free from electrical and fire hazards as required in a residential environment. As evidence of compliance with this requirement, the completely assembled, factory wired and tested grinder pump station assembly shall be U.L. listed. Grinder pump stations not U.L. listed will not be acceptable.

STATION CONFIGURATION: Basins shall be supplied in a wet well configuration. Wet well must have minimum storage volumes above alarm level according to the following table:

<table>
<thead>
<tr>
<th>Overall Station Height</th>
<th>Minimum Reserve Storage Above Alarm Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>48” (1.2 Meters)</td>
<td>35.7 gallons (135 Liters)</td>
</tr>
<tr>
<td>60” (1.5 Meters)</td>
<td>59.2 gallons (224 Liters)</td>
</tr>
<tr>
<td>72” (1.8 Meters)</td>
<td>82.7 gallons (313 Liters)</td>
</tr>
<tr>
<td>84” (2.1 Meters)</td>
<td>106.2 gallons (402 Liters)</td>
</tr>
<tr>
<td>96” (2.4 Meters)</td>
<td>129.7 gallons (491 Liters)</td>
</tr>
<tr>
<td>108” (2.7 Meters)</td>
<td>153.2 gallons (580 Liters)</td>
</tr>
<tr>
<td>120” (3.0 Meters)</td>
<td>176.7 gallons (669 Liters)</td>
</tr>
</tbody>
</table>

LEVEL DETECTION: Level detection for controlling pump and alarm operation shall be accomplished by use of a detection mechanism specifically designed for use in a sewage grinder pump basin 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 a Barnes “FloatTREE” type designed 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 switches, one for each function (HIGH WATER ALARM, ON and OFF functions). Switch assembly shall utilize an 18-8 cable, color coded leads. Switch assembly shall be 100% tested prior to shipment. The control assembly shall be part of the U.L.1951 listing. 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. Duplex stations shall add a fourth switch for lag pump ON operation. (Conductor colors: Red, White, Black, Orange, Blue, Red with Black stripe, Green and White with Black stripe.) Conventional suspending of mercury floats, mechanical, or swing arm floats for HIGH WATER ALARM, LAG ON and OFF functions will not be acceptable.

SHUT-OFF VALVE: The pump discharge shall be equipped with a factory installed, true union, manual ball valve. Ball valves shall be full ported, constructed of PVC, 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. Duplex station shall utilize two shut off valves, each equal to the size of the pump discharge.

ANTI-SIPHON FUNCTION: The pump shall be constructed with a positively primed flooded suction configuration. As added assurance that the pump cannot lose prime even under negative pressure conditions in the discharge piping system, the discharge piping system must include an anti-siphon capability.

(Continued on next page)
### Specifications

#### Duplex UltraGRIND™ Jobsite Wired Basin Package

Stainless Rail with Junction Box & Steel Cover

---

**Pre-Packaged Fiberglass Systems**

---

<table>
<thead>
<tr>
<th>BASIN CONSTRUCTION AND ASSEMBLY:</th>
<th>The basin shall be fiberglass reinforced polyester resin with a 3” (76.2mm) ballast support flange. The basin shall be furnished with one flexible inlet flange (shipped loose to facilitate field location) to accept a 4.50” (114mm) 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 62.4 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. All piping inside the basin silhouette shall be lower in the station than the depth of buries 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 designed 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, which ever is lowest. The basin package shall be furnished with junction box. Incase of groundwater flooding around grinder station location, the junction box shall be protected from such ground water.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cover shall be a painted steel cover with a hinged access opening to accommodate removal of pumps. Junction box shall be NEMA 6 rated and mounted on the upper rail system cross-member beneath the access opening. Basin shall be UL Listed to Standard 1951. All discharge piping shall be constructed of 300 Series Stainless Steel and terminate outside the bulkhead with a stainless steel, female NPT fitting. The manufacturer shall guarantee all bulkhead penetrations watertight.</td>
<td></td>
</tr>
<tr>
<td>PUMP REMOVAL SYSTEM:</td>
<td>Each basin shall be equipped with two 300 series stainless steel “C” channel rail assemblies, one for each pump to facilitate removal of the pump(s) from ground level. A 1/2” (12.7mm) diameter polypropylene rope shall be supplied for each pump. 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 de-water the basin.</td>
</tr>
</tbody>
</table>

---

**USA: (937) 778-8947 • Canada: (905) 457-6223 • International: (937) 615-3598**

---

**A Crane Co. Company**

---

**CRANE® PUMPS & SYSTEMS**

---

**www.cranepumps.com**

---

**FILE: SPEC42**

---

**3/05**
DESCRIPTION: The manufacturer shall furnish complete factory-built and tested Grinder Pump Station(s), each consisting of a basin package, control panel, alarm device, unitized level control system, grinder pump and all necessary appurtenances to form a complete U.L. listed package system. Grinder pump shall be listed to U.L. 778 and CSA 108, basin package shall be listed to U.L. 1951, and control panel shall be listed to U.L. 508. All equipment in the wet well shall be capable of constant submergence in sewage to a minimum depth of ten feet without electrical power being energized.

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 grinder pump stations for a minimum of five 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 grinder pump station manufacturers will be considered. All bids utilizing manufacturers not pre-approved will be considered non-responsive.

WARRANTY: The manufacturer shall provide a warranty on any defective part(s) and labor to replace defective parts for a period of twelve (12) months after notice of owner's acceptance, but no greater than twenty-four (24) months after receipt of shipment. 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.

ACCEPTABLE MANUFACTURER(S): Acceptable grinder pump station manufacturer(s) are Barnes Pumps 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.

SAFETY: The Grinder Pump Station shall be free from electrical and fire hazards as required in a residential environment. As evidence of compliance with this requirement, the completely assembled, factory wired and tested grinder pump station assembly shall be U.L. listed. Grinder pump stations not U.L. listed will not be acceptable.

STATION CONFIGURATION: Basins shall be supplied in a wet well configuration. Wet well must have minimum storage volumes above alarm level according to the following table:

<table>
<thead>
<tr>
<th>Overall Station Height</th>
<th>Minimum Reserve Storage Above Alarm Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>48&quot; (1.2 Meters)</td>
<td>35.7 gallons (135 Liters)</td>
</tr>
<tr>
<td>60&quot; (1.5 Meters)</td>
<td>59.2 gallons (224 Liters)</td>
</tr>
<tr>
<td>72&quot; (1.8 Meters)</td>
<td>82.7 gallons (313 Liters)</td>
</tr>
<tr>
<td>84&quot; (2.1 Meters)</td>
<td>106.2 gallons (402 Liters)</td>
</tr>
<tr>
<td>96&quot; (2.4 Meters)</td>
<td>129.7 gallons (491 Liters)</td>
</tr>
<tr>
<td>108&quot; (2.7 Meters)</td>
<td>153.2 gallons (580 Liters)</td>
</tr>
<tr>
<td>120&quot; (3.0 Meters)</td>
<td>176.7 gallons (669 Liters)</td>
</tr>
</tbody>
</table>

LEVEL DETECTION: Level detection for controlling pump and alarm operation shall be accomplished by use of a detection mechanism specifically designed for use in a sewage grinder pump basin 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 a Barnes “FloatTREE™” type designed 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 switches, one for each function (HIGH WATER ALARM, ON and OFF functions). Switch assembly shall utilize an 18-8 cable, with color coded leads. Switch assembly shall be 100% tested prior to shipment. The control assembly shall be part of the U.L.1951 listing. 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. Duplex stations shall add a fourth switch for lag pump ON operation. (Conductor colors: Red, White, Black, Orange, Blue, Red with Black stripe, Green and White with Black stripe.) Conventional suspending of mercury floats, mechanical, or swing arm floats for HIGH WATER ALARM, ON, LAG ON and OFF functions will not be acceptable.

SHUT-OFF VALVE: The pump discharge shall be equipped with a factory installed, true union, manual ball valve. Ball valves shall be full ported, constructed of PVC, 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. Duplex station shall utilize two shut off valves, each equal to the size of the pump discharge.

ANTI-SIPHON FUNCTION: The pump shall be constructed with a positively primed flooded suction configuration. As added assurance that the pump cannot lose prime even under negative pressure conditions in the discharge piping system, the discharge piping system must include an anti-siphon capability.
Specifications
Duplex UltraGRIND™ Jobsite Wired Basin Package
Stainless Rail with Junction Box & Aluminum Cover

Pre-Packaged Fiberglass Systems

BASIN CONSTRUCTION AND ASSEMBLY: The basin shall be fiberglass reinforced polyester resin with a 3” (76.2) ballast support flange. The basin shall be furnished with one flexible inlet flange (shipped loose to facilitate field location) to accept a 4.50”(114mm) 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 All piping inside the basin silhouette shall be lower in the station than the depth of buries 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, which ever is lowest. The basin package shall be furnished with junction box. Incase of groundwater flooding around grinder station location, the junction box shall be protected from such ground water.

Cover shall be an aluminum cover with a hinged access opening to accommodate removal of pumps. Junction box shall be NEMA 6 rated and mounted on the upper rail system cross-member beneath the access opening.

Basin shall be UL Listed to Standard 1951.

All discharge piping shall be constructed of 300 Series Stainless Steel and terminate outside the bulkhead with a stainless steel, female NPT fitting. The manufacturer shall guarantee all bulkhead penetrations watertight.

PUMP REMOVAL SYSTEM: Each basin shall be equipped with two 300 series stainless steel “C” channel rail assemblies, one for each pump to facilitate removal of the pump(s) from ground level. A 1/2” (12.7mm) diameter polypropylene rope shall be supplied for each pump. 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 de-water the basin.

End