

Part 1 General

1.1 SUBMITTALS

- .1 Submittals in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Product Data:
 - .1 Submit manufacturer's printed product literature, specifications and data sheet for fixtures and equipment.
- .3 Shop Drawings.
 - .1 Submit shop drawings to indicate:
 - .1 Equipment, including connections, fittings, control assemblies and ancillaries. Identify whether factory or field assembled.
 - .2 Wiring and schematic diagrams.
 - .3 Dimensions and recommended installation.
 - .4 Pump performance and efficiency curves.
- .4 Instructions: submit manufacturer's installation instructions.
- .5 Closeout submittals: submit maintenance and engineering data for incorporation into manual specified in Section 01 78 00 - Closeout Submittals, include:
 - .1 Manufacturers name, type, model year, capacity and serial number.
 - .2 Details of operation, servicing and maintenance.
 - .3 Recommended spare parts list with names and addresses.

Part 2 Products

2.1 SUMP PUMP SUBMERSIBLE

- .1 Capacity: as indicated on the drawings.
- .2 Motor: as indicated, hermetically sealed.
- .3 Specific Requirements:
 - .1 P-L10
 - .1 Motor:
 - .1 Internal overload protection.
 - .2 120VAC, 1Ø
 - .2 Power Cable:
 - .1 Heavy duty rated, oil and water resistant.
 - .2 Epoxy seal on motor end
 - .3 Length: 3m (10').
 - .3 Control: integral diaphragm type level control.
 - .4 Solids handling capability: 19mm (3/4")
 - .5 Discharge size: 50mm (2") NPT.
 - .6 Capacity and head: As shown on the drawings.

- .7 Temperature: 40°C continuous
- .8 Impeller: Silicone bronze
- .9 Casing: Cast iron volute type
- .10 Mechanical Seal: Silicon Carbide vs. Silicon Carbide sealing faces.
Stainless steel metal parts, BUNA-N elastomers.
- .11 Shaft: stainless steel.
- .12 Fasteners: stainless steel.
- .13 Capable of running dry without damage to components.
- .14 Bearings: Heavy duty ball bearing construction.
- .15 Manufacturer and Model
 - .1 Goulds SP035V,
 - .2 Or approved equal in accordance with B7.

Part 3 Execution

3.1 MANUFACTURER'S INSTRUCTIONS

- .1 Compliance: comply with manufacturer's written recommendations or specifications, including product technical bulletins, handling, storage and installation instructions, and data sheet.

3.2 INSTALLATION

- .1 Make piping and electrical connections to pump and motor assembly and controls as indicated on the drawings, and as per manufacturer instructions.
- .2 Ensure pump and motor assembly do not support piping.
- .3 Align vertical pit mounted pump assembly after mounting and securing cover plate.

3.3 START-UP

- .1 General:
 - .1 Procedures:
 - .1 Check power supply.
 - .2 Start pumps, check impeller rotation.
 - .3 Check for safe and proper operation.
 - .4 Check settings, operation of operating, limit, safety controls, over-temperature, audible/visual alarms, other protective devices.
 - .5 Adjust alignment of piping and conduit to ensure full flexibility.
 - .6 Eliminate causes of cavitation, flashing, air entrainment.

END OF SECTION

Part 1 General

1.1 REFERENCES

- .1 American Water Works Association (AWWA).
 - .1 AWWA C511-07, Reduced-Pressure Principle Backflow Prevention Assembly.
- .2 Canadian Standards Association (CSA International).
 - .1 CSA-B64 Series, Backflow Preventers and Vacuum Breakers.

1.2 SUBMITTALS

- .1 Submittals in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Product Data:
 - .1 Submit manufacturer's printed product literature, specifications and datasheet for fixtures and equipment.
 - .2 Indicate dimensions, construction details and materials for specified items.
- .3 Certificates: submit certificates signed by manufacturer certifying that materials comply with specified performance characteristics and physical properties.
- .4 Instructions: submit manufacturer's installation instructions.
- .5 Closeout submittals: submit maintenance and engineering data for incorporation into manual specified in Section 01 78 00 - Closeout Submittals, include:
 - .1 Description of plumbing specialties and accessories, giving manufacturers name, type, model, year and capacity.
 - .2 Details of operation, servicing and maintenance.
 - .3 Recommended spare parts list.

Part 2 Products

2.1 REDUCED-PRESSURE BACK FLOW PREVENTERS

- .1 Preventers: to CSA-B64 Series, reduced pressure principle type.
- .2 Valve body: bronze.
- .3 End connections: threaded, NPT.
- .4 Maximum working pressure: 1207 kPa (2413 kPa test).
- .5 Temperature range: 0 to 60°C.
- .6 Shutoff valve: full port, resilient seated, bronze ball valve with bronze ball valve test cock.
- .7 Accessories: drain line air gap fitting.
- .8 Acceptable material: Watts or approved equal in accordance with B7.

2.2 HOSE BIBBS AND SEDIMENT FAUCETS

- .1 Bronze construction complete with integral back flow preventer, hose thread spout, replaceable composition disc, and chrome plated in finished areas.

2.3 STRAINERS

- .1 860 kPa, Y type with 20 mesh, monel, stainless steel removable screen.
- .2 NPS2 and under, bronze body, screwed ends, with brass cap.

Part 3 Execution

3.1 MANUFACTURER'S INSTRUCTIONS

- .1 Compliance: comply with manufacturer's written recommendations or specifications, including product technical bulletins, handling, storage and installation instructions, and data sheet.

3.2 INSTALLATION

- .1 Install in accordance with the National Plumbing Code of Canada and local authority having jurisdiction.
- .2 Install in accordance with manufacturer's instructions and as specified.

3.3 BACK FLOW PREVENTORS

- .1 Install in accordance with CSA-B64 Series, where indicated and elsewhere as required by code.
- .2 Pipe discharge to terminate over nearest drain.

3.4 HOSE BIBBS AND SEDIMENT FAUCETS

- .1 Install at bottom of risers, at low points to drain systems, and as indicated.

3.5 STRAINERS

- .1 Install with sufficient room to remove basket.

3.6 START-UP

- .1 Timing: start-up only after:
 - .1 Pressure tests have been completed.
 - .2 Disinfection procedures have been completed.
 - .3 Certificate of static completion has been issued.
- .2 Provide continuous supervision during start-up.

3.7 TESTING AND ADJUSTING

- .1 Backflow preventers:
 - .1 Test tightness, accessibility for O&M of cover and of valve.
 - .2 Simulate reverse flow and back-pressure conditions to test operation of vacuum breakers, backflow preventers.

- .3 Verify visibility of discharge from open ports.
- .2 Strainers:
 - .1 Clean out repeatedly until clear.
 - .2 Verify accessibility of cleanout plug and basket.
 - .3 Verify that cleanout plug does not leak.

END OF SECTION