

Bulletin: RJ 23-25
Revision: B*
Product: **Submersible Pumps**
Reference: **Pump Length and Tank Configuration**
Date: May, 1997

The inside dimensions of the underground storage tank and the burial depth determine the physical size (length) of the submersible pump.

Considering all the changes taking place in the industry, including tank configuration, tank dimensions can no longer be assumed to be a "standard" size. (i.e. an 8' tank could actually measure from 90" to 100" depending on whether or not it is steel or fiberglass, single wall or double wall, etc.)

The Total Inside Diameter (T.I.D.) of the tank is the critical measurement. This measurement is the distance from the point of pump mounting (where the riser threads into the tank opening) to the bottom of the inside tank. T.I.D. along with the bury depth (the distance from grade level to top of tank) determines the total length of the submersible and how that length is distributed inside and above the tank.

In order to assure shipment of the proper pump size, we must have the information outlined below on every purchase order. Two options for providing this information are designated.

- OPTION 1: For any type tank provide
- A) Tank manufacturer
 - B) Tank model number
 - C) Point of pump mounting
 - D) Burial depth

This option will enable us to obtain the dimensions from the tank manufacturers' drawings.

- OPTION 2: If manufacturer and model number are not known, the following information will be required. Find the type of tank below in Sections A or B, provide the requested information and then see Section C.

- A) Steel Tanks (including fiberglass coated steel)
 - 1. Single wall: provide accurate total inside diameter
 - 2. Double wall: will pump riser mount directly on tank or on a manway
 - a. Direct on tank, no manway; provide accurate inside tank diameter and height of any tank fittings
 - b. Manway: provide accurate inside tank diameter and height of manway
- B) Fiberglass Tanks
 - 1. Single wall: provide accurate inside diameter
 - 2. Double wall: will pump riser mount directly on tank fittings or on a manway
 - a. Tank fittings: provide total inside diameter from top of fitting to bottom of inside tank
 - b. Manway: provide total inside diameter from top of manway to bottom of inside tank

C) Bury Depth

1. Underground Storage Tanks:

- a. Provide bury depth measurement from grade level to top of tank (in this case, top of packer/manifold unit will be 4" - 6" from grade).

NOTE: The minimum bury depth for a 4" submersible is 18"; for a 6" Big-Flo, it is 24".

- b. Provide measurement for top portion of pump (riser, pac/man assembly and line leak detector) to fit within. (Example: a containment sump will negate the need for a bury depth as the top portion of the pump must fit within the sump).

2. Above Ground Storage Tanks: Bury depth is not a factor, the pump will be built with the shortest riser.

Figure 1, below, illustrates how a Red Jacket 4" Extracta pump fits into a single wall tank. Please note the set dimension of the packer/manifold assembly (11") and how any deviation of tank diameter or bury depth will affect the length and/or proportions of the pump.

Figure 2, below, illustrates the Red Jacket Big-Flo pump and its fit into a single wall tank. Again, note the set dimensions of the packer/manifold assembly (6-3/4") and conduit box area (4"). Any deviation of tank diameter or buy depth will affect the length and/or proportions of the pump.

FIGURE 1: 4" Submersible Pump mounted in a single wall tank

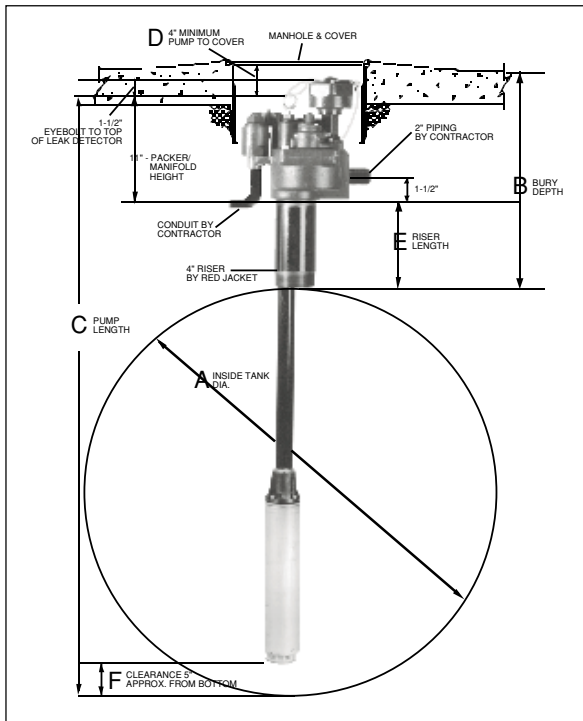
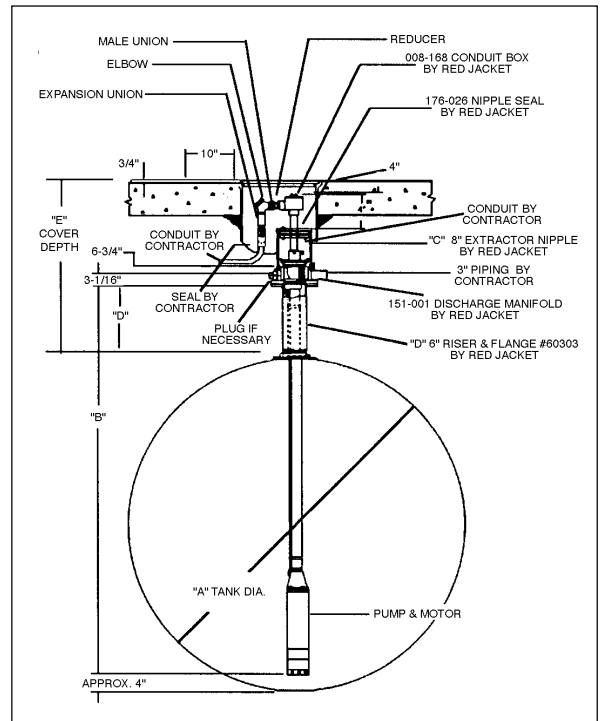


FIGURE 2: 6" Big-Flo Pump mounted in a single wall tank



Contact Red Jacket Industrial Products Technical Support at 1-800-262-7539 with questions.