

Reverse float level indicator by Cy-Bo



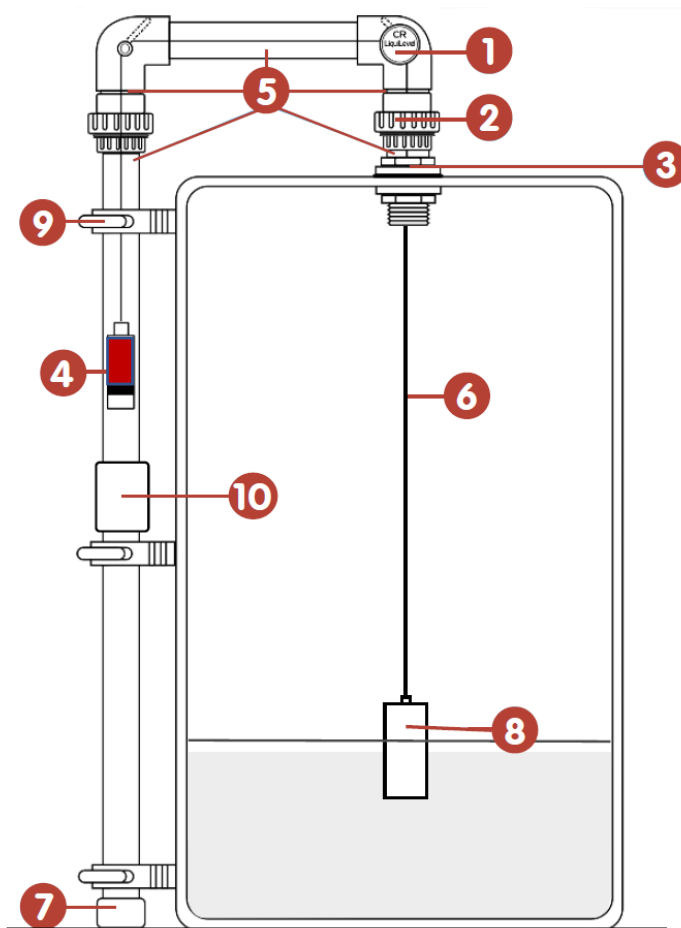
Installation and operation manual



Reverse float level indicator by Cy-Bo

System layout

No.	Product description
1	1.25"Ø 90° PVC pulley elbow Qty: 2
2	1.25"Ø Union PVC Qty: 2
3	1.25"Ø Tank adaptor PVC Qty: 1
4	Red PVC magnetic counterweight Qty: 1
5	1.25"Ø Clear PVC pipe (guide tube) Qty: as required
6	Polypropylene braided cord 3mmØ Qty: 21'
7	1.25"Ø Cap PVC Qty: 1
8	Polypropylene solid float Qty: 1
9	1.25"Ø Pipe clips Qty: as required
10	1.25"Ø Coupling PVC Qty: as required



Some items are not included but will be required for installation:

- Cement and solvent PVC, available at Les Plastiques Cy-Bo.
- Plastic pipe cutter, available at your hardware store.
- Measuring tape, available at your hardware store.
- Level, available at your hardware store

Installation (1 - Pipe and fittings)

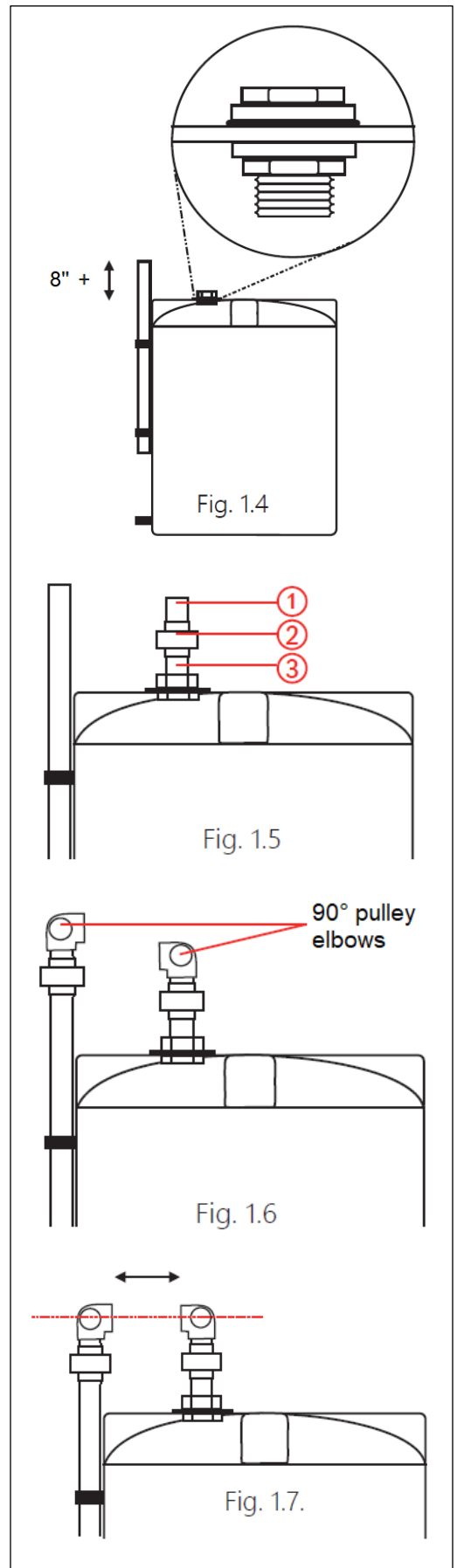
- 1- Install the tank adapter on the top of the tank, as far away as possible from tank connections, valves, instruments, fill, overflow...
- 2- Choose the best location for the red counterweight guide tube. It needs to be installed where it can be easily seen for visual tank monitoring.
- 3- Install the pipe clips vertically to the tank every 40". It's very important that all pipe clips line up vertically and are plumb.
- 4- Insert a length of clear PVC pipe 1.25"Ø pipe (do not cut yet) into the pipe clips making sure the PVC pipe is at least 8" higher than the tank height. This will now give you the correct vertical location of the guide tube. *Figure 1.4*
- 5- Cut a 4" length of PVC pipe and insert it into tank adapter. *Figure 1.5 (3)* Insert pipe union on top of 4" pipe. *Figure 1.5 (2)* And cut another 4" pipe and insert it on top of the union. *Figure 1.5 (1)* These measurements are the minimum requirements. Pipes can be longer if required.

*Assemble the union and elbow of the guide tube in the same manner.

- 6- Insert the two 90° PVC pulley elbows to both vertical pipes and rotate fitting so they are facing each other. *Figure 1.6*
- 7- Adjust height of PVC guide tube so top of pulleys are leveled. This will now give you the correct distance between the pulleys. Add 2" to this length (each elbow has a 1" socket). Cut pipe to correct length.

Cutting PVC pipes.

PVC pipes must be cut with a plastic pipe cutter or pipe saw. All ends should be free of burrs. Cut the pipe square. Make sure the ends of the pipes are free from any sharp edges, using a file if necessary.



Installation (1 - Pipe and fittings)

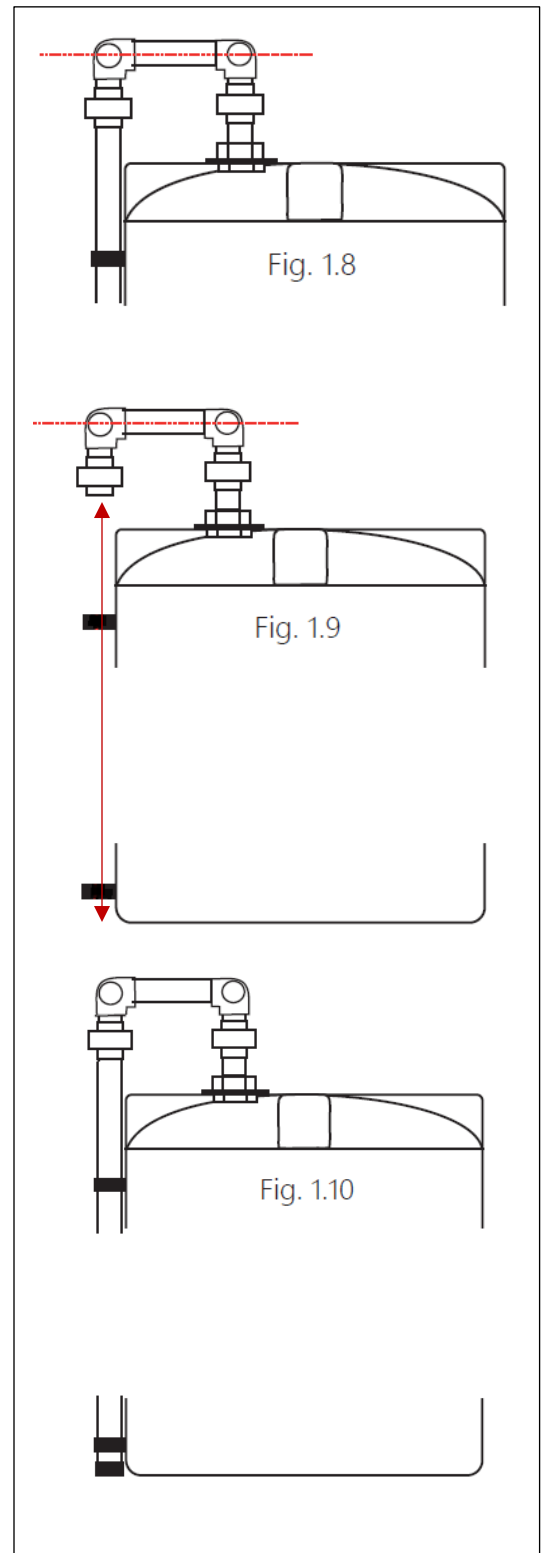
- 8- Insert pipe into both pulley elbows and align with vertical pipe. *Figure 1.8*
- 9- Undo the PVC guide tube from the union and tank pipe clips. *Figure 1.9* Measure from the base of the tank to the bottom of the union, add 1" (for the union socket) then subtract 3/8" (to compensate for the pipe cap, which will be inserted at the bottom of the vertical pipe). Cut the pipe to the correct length.

Note: if your tank height is greater than your pipe length, you can install a coupling to achieve the required length.

- 10- Insert pipe cap into the bottom of the vertical pipe and then insert into the union. *Figure 1.10*

All pipes should now be cut

- 11- With the system now pre-assembled, (not yet glued together) mark all pipe joints with a knife or sharp object. This will help later when gluing and aligning the fittings and system together.
- 12- Disassemble the pipe work and pipe fittings so you can assemble and install the counterweight and float.



Installation (2 – Red counterweight)

Before installing and gluing the system together, the cord needs to be installed and cut to the correct length. When assembling the counterweight (red), make sure the float is not attached to the other end of the cord.

- 1- Unscrew the counterweight top cap. *Figure 2.1*
- 2- Insert cord through the hole in the top cap. *Figure 2.2*
- 3- Tie a single knot and pull cord tight. *Figure 2.3*
- 4- With the cord fastened securely, cut the cord as near to the knot as possible. *Figure 2.4*
- 5- Screw top cap back into counterweight. *Figure 2.5*

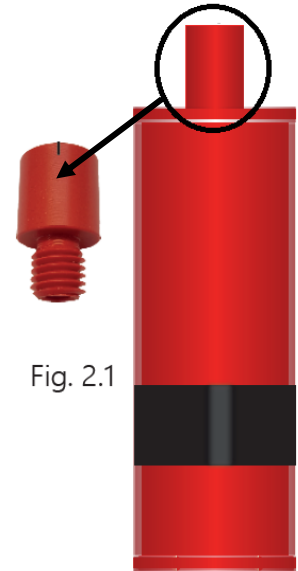


Fig. 2.1



Fig. 2.2



Fig. 2.3



Fig. 2.4



Fig. 2.5

Installation (3 - Polypropylene float)

- 1- Unscrew cord screw from the top of the float. *Figure 3.1*
- 2- Insert the cord through the center hole of the cord screw. *Figure 3.2*
- 3- Pull cord through until you reach the marking point on the cord (see next page figure 3.6) *Figure 3.3*
- 4- Tie knot. *Figure 3.4*
- 5- Cut off excess cord. *Figure 3.5*



Fig. 3.1



Fig. 3.2

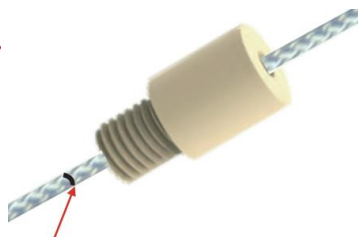


Fig. 3.3



Fig. 3.4



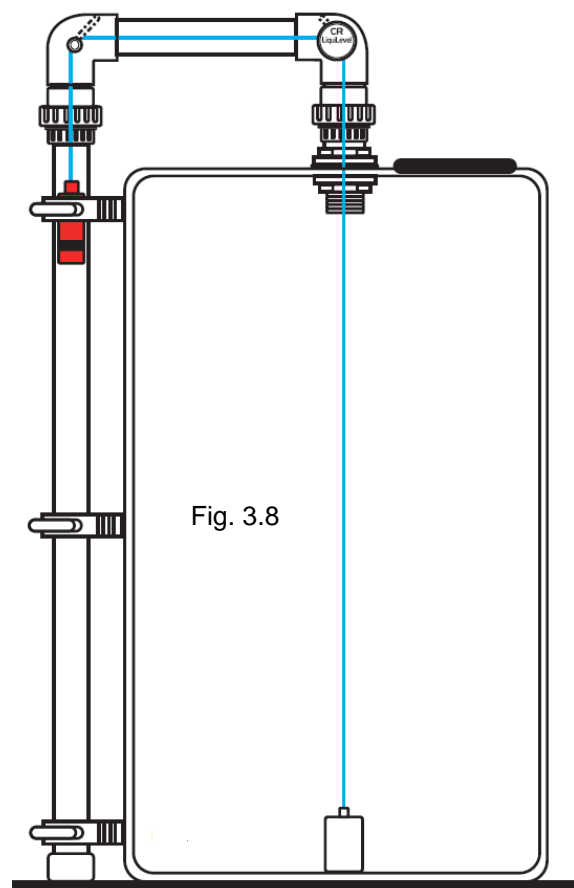
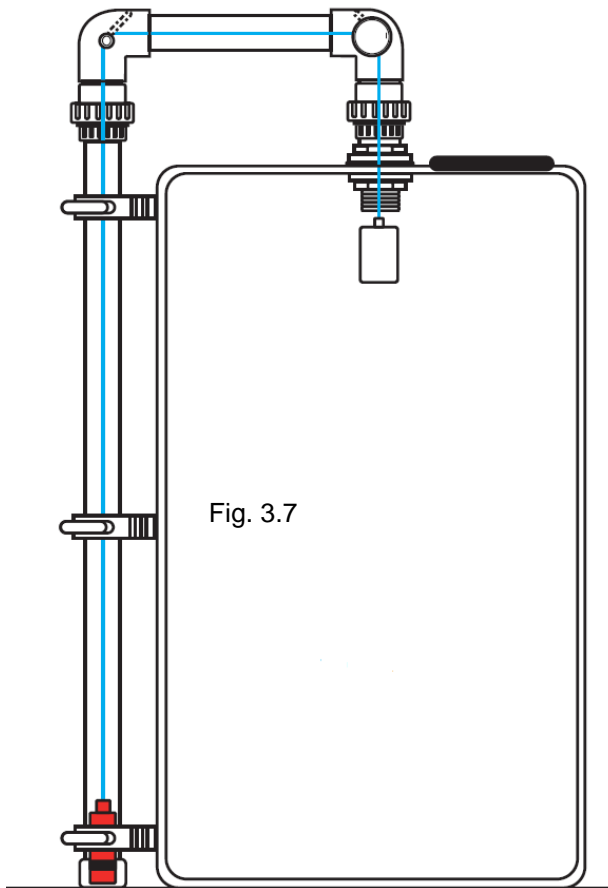
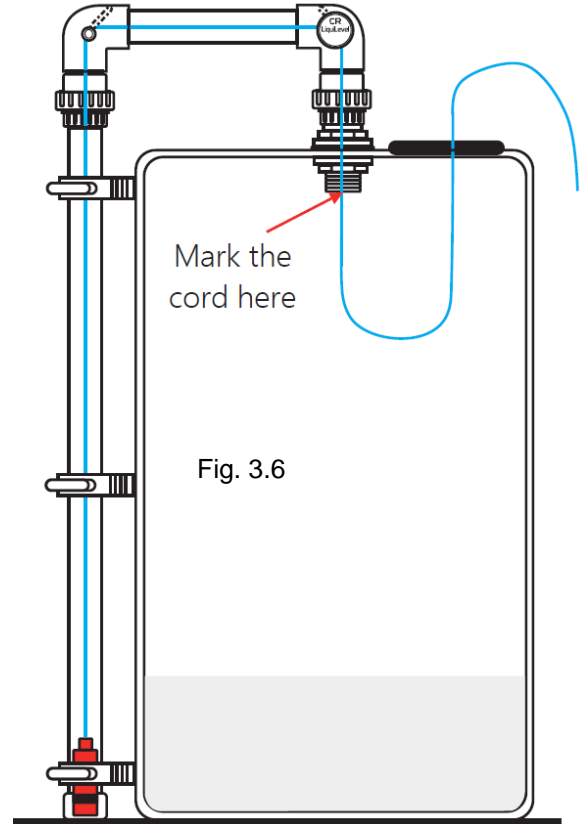
Fig.3.5

Installation (3 - Polypropylene float)

- 6- The cord length will be determined by lowering the counterweight to the bottom of the PVC pipe. With the cord now threaded through all the pipe and fittings you can now mark the cord at the highest point of the tank. *Figure 3.6*
- 7- Pull the cord through the tank inspection point and screw the float back to the cord screw. *Figure 3.7*

Check the system is working by pulling on the polypropylene float to make sure the cord is running on the pulleys.

Remember when the tank is empty, the red PVC counterweight should be at the upper part of the guide tube (clear PVC pipe). *Figure 3.8*



Installation (4 - Solvent welding PVC)

- 1- Apply solvent cleaner to all relevant pipe and pipe fittings.
- 2- Apply a continuous band of glue to the PVC pipe ends and now firmly assemble the pipe and pipe fitting with the marks on the pipe (See 1.11)
- 3- Carefully wipe off any excess glue. Gluing the system together will provide a vapor tight seal.

i Guide to solvent welding: <https://www.cy-bo.com/en/products/plumbing-accessories/cement-and-primer>

Maintenance

The reverse float level indicator by Cy-Bo does not require any specific maintenance. In case of dismounting, unscrew the nuts on the mechanical unions to access internal parts.

Important note

The pulley elbows have an anti-jump loop that will always keep the cord running freely on the pulley. It is very important that these pulley elbows are installed correctly. The loop must be at the top of the fitting. This can be checked by looking at the product label on the pulley elbow. The logo should be horizontal as shown below.

