

Instruction Sheet

TROLL® Replaceable Battery Pack

Part number 0090000

Kit Contents



- TROLL Replaceable Battery Pack
- 1.5 V or equivalent AA size batteries (8)
- Small desiccant (for shipping use only)

Available Connections

The TROLL Replaceable Battery Pack connects to the following components.

- The twist-lock connectors on a RuggedCable System
- TROLL Com Communication Devices
- Small desiccant (for shipping use only), large desiccant pack, extra large desiccant pack (for instrument deployment)

Application

The TROLL Replaceable Battery Pack supplements internal battery power for an Aqua TROLL 100, 200, or Level TROLL 400, 500, or 700. The battery pack extends the life of a TROLL device when used properly. The battery pack is particularly suited for long-term or limited-access deployments, and for applications that require frequent, fast data sampling.

Physical Characteristics

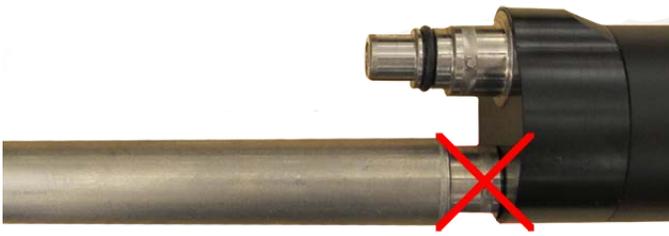
Materials	Titanium, Viton®, Acetal
Dimensions	17.8 cm (7.0 in.) length, 4.3 cm (1.7 in.) OD
Weight	0.43 kg (0.95 lb) without batteries installed

Alkaline battery temperature range	-5 to 55° C (23° to 131° F)
Lithium battery temperature range	-40 to 60° C (-40 to 140° F)
Environmental rating	IP67 (not submersible)
Battery type	1.5 V or equivalent AA size
Estimated battery lifetime*	Aqua TROLL 100/200 - 5.4 years Level TROLL family - 1.4 years

* Logging all available parameters at 15-minute intervals. Battery lifetime is dependent on temperature and site conditions.

Guidelines and Precautions

- Do not use with any instrument other than an Aqua TROLL 100 or 200, or Level TROLL 400, 500, or 700.
- The battery pack is vented, and therefore must be desiccated **even if the rest of the deployment is non-vented**.
- Do not submerge the battery pack.
- The battery pack will not function if the batteries are installed incorrectly.
- Do not mix lithium and alkaline batteries.
- For best performance in all environmental conditions, use Energizer® L91 lithium batteries or equivalent.
- Energizer E91 alkaline batteries should not be used at very low or very high temperatures.
- Do not apply additional external power to a TROLL Com device when the battery pack is connected.
- Do not install an instrument directly into the female connection port of the battery pack, as shown below. Instruments must be connected using only a RuggedCable that connects to the male connection port of the battery pack.

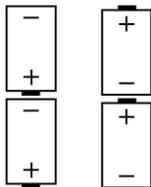


Install the Batteries

Do not install batteries until you are ready to deploy the TROLL Replaceable Battery Pack.

✓ The battery pack is shipped with a small desiccant installed in one connection port. This desiccant pack is for shipping only. Always replace this desiccant with a larger model before deployment. Never deploy the battery pack with the small desiccant installed.

2. Pull out the small desiccant from the connection port.
3. Grasp the battery pack body in one hand. Grip the battery pack cap in the other hand.
4. Push in the white button on the cap using your thumb or finger, and pull off the cap.
5. Install batteries into the four chambers of the battery pack body, ensuring that they are aligned properly. Use the graphic located in each battery chamber to properly align the batteries.



⚠ Do not mix lithium and alkaline batteries.

6. Align the two set screws of the battery pack cap with the small holes in the battery pack body. Push the cap and body together firmly. You will hear a click when the cap connects securely to the body.

Install the Battery Pack

Install the TROLL Replaceable Battery Pack at the top of the well. Never submerge the battery pack.

If you have a direct-connect TROLL Com, you will need to program the TROLL instrument prior to installing the battery pack. See the instrument Operator's Manual for instructions on programming the TROLL instrument.

1. Remove the red dust cap from the male twist-lock connector of the battery pack. Save the dust cap for later use.
2. Connect the male twist-lock connector to the up-hole end of the RuggedCable, near the Kellems® grip.
3. Connect a TROLL instrument to the down-hole end of the RuggedCable.
4. If you still need to program the TROLL instrument, connect a TROLL Com to the female connection of the battery pack. **Do not apply additional external power to a TROLL Com device when the battery pack is connected.** Once programmed, remove the TROLL Com device from the battery pack.

5. Install a desiccant pack to the female connection of the battery pack. Use a large or extra large desiccant pack, part numbers 0051810 (Large Desiccant, Titanium Connector), 0053550 (Large Desiccant, ABS Connector) or 0090420 (Extra Large Desiccant). **Never deploy the battery pack with the small desiccant pack used for shipping.**
6. Adjust the Kellems grip to create a service loop in the cable. A service loop allows the battery pack to hang near the top of the well. To adjust the grip, push both ends of the grip toward each other and slide the grip along the cable. The grip should be approximately 0.3 to 0.6 m (1 to 2 ft) from the up-hole end of the RuggedCable. Be sure that the loop is not long enough to allow the battery pack to be submerged.
7. Attach the grip to an appropriately-sized well dock.
8. Deploy the TROLL instrument in the well.
9. Use the service loop to position the battery pack down into the air space of the well casing.

