

External Reservoir for PPCH

4-liter Capacity

Instruction Sheet

Introduction

Note

This instruction sheet is a quick installation guide. For further details, see the PPCH Operation and Maintenance Manual sections on use of an external reservoir.

The External Reservoir kit is for use with the PPCH Hydraulic Pressure Controller. The external reservoir is provided for applications that more fluid than can be held in the 300 cm³ internal reservoir. The external reservoir connects in series with the internal reservoir so that internal reservoir features remain available.

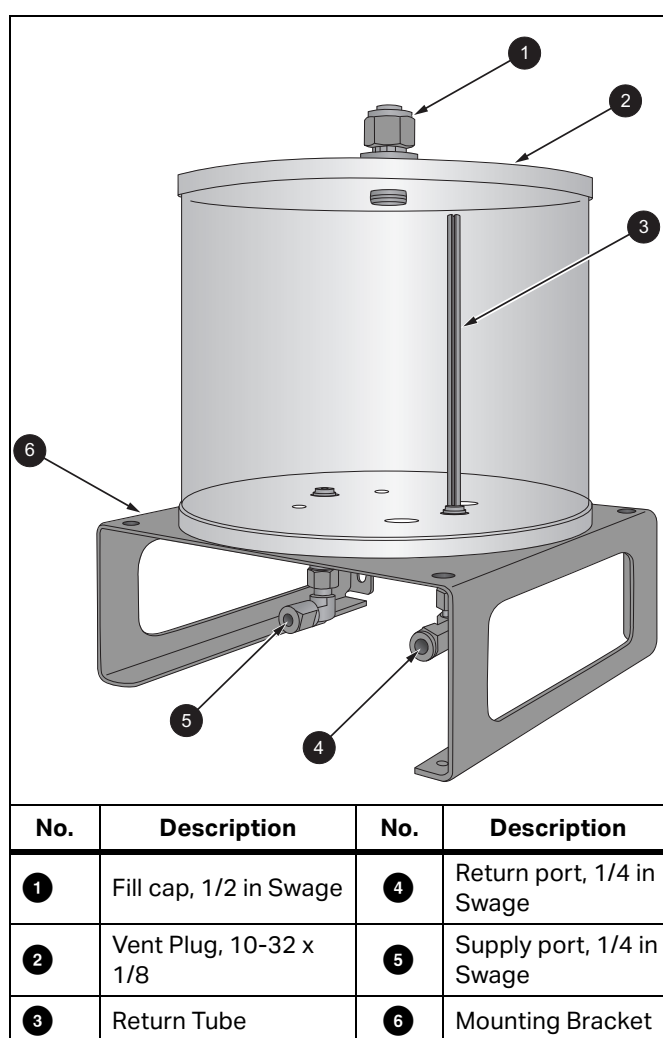
External Reservoir, PN 3071543, includes the items in [Table 1](#):

Table 1.

Description	Qty	Part Number
Assembly, External Reservoir kit	1	3122080
Tubing, PFA, 1/4 in O.D. x 300 cm	1	3232378
Adapter, 1/8 in NPTM x 1/4 in Swage	1	3862777
Nut, SS, 1/4 in Swage	1	3132930
Ferrule, SS, front, 1/4 in Swage	1	3132948
Ferrule, SS, rear, 1/4 in Swage	1	3132953
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See [Table 2](#).

Table 2.



PN 3152837 (English)

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Reservoir Installation

Initial Considerations:

1. **Internal reservoir attachments not used:** When you use the internal reservoir, a fill tube bracket, sight tube, and funnel are mounted on the rear of the PPCH. These attachments are not used with the external reservoir. If the attachments are already installed, remove them. Make sure to close the **FILL/DRAIN** valve prior to removal.
2. **Reservoir above the PPCH:** The bottom of the reservoir must be higher than the PPCH instrument to ensure a proper gravity feed of fluid to the internal reservoir and pump. Avoid low points in the tubing between PPCH and the reservoir.
3. **Secure the reservoir:** Pass throughs (5.4 mm Ø) are provided in the mounting bracket to secure the reservoir.
4. **Prepare the tubes:** 300 cm of 1/4 in O.D. PFA tubing is provided to make tube connections between the external reservoir and the PPCH. The fittings on the external reservoir are 1/4 in Swage. The ferrules must be swaged to each end of the tubes.
5. **Adapter for Reservoir return:** Use the supplied 1/8 in NPTM x 1/4 in Swage adapter for the **EXTERNAL RESERVOIR RETURN** bulkhead on the PPCH.

Caution

To prevent accidental draining of the internal reservoir, keep the **FILL/DRAIN** valve in the closed position until the external reservoir is connected.

Reservoir Installation

To install the reservoir, see [Table 2](#):

1. **Close valve:** Close the reservoir **FILL/DRAIN** valve.
2. **Install adapter:** Install the 1/8 in NPTM x 1/4 in Swage adapter in the **PPCH EXTERNAL RESERVOIR RETURN** bulkhead fitting.
3. **Connect tubes:** Connect a tube from the **PPCH EXTERNAL RESERVOIR RETURN** port to the return port (4) on the external reservoir.
4. **Connect tubes:** Connect a tube from the **PPCH FILL/DRAIN** port to the supply port (5) on the external reservoir. The stainless steel Swage fittings are used at the **PPCH FILL/DRAIN** port connection.
5. **Fill external reservoir:** Fill the external reservoir through the 1/2 in Swage brass fitting (1) with the same fluid as is used in the PPCH. Do not fill past the top of the stainless steel return tube.

Notes

- The MAX FILL label on the rear of the PPCH does not apply when you use an external reservoir.
 - The top of the return tube defines the fluid head applied to the Q-RPT of the PPCH when in a VENT condition.
6. **Enable reservoir return:** Turn the **PPCH RESERVOIR RETURN** valve to the **EXTERNAL** position, and loosen the vent plug on top of the reservoir - this is a 10-32 x 1/8 threaded plug.

Note

Make sure the external reservoir is open to atmosphere so proper system venting and zeroing can occur.

7. **Purge overflow circuit:** Purge air from the internal reservoir and the overflow circuit:
 - Prepare the 1/8 in NPT plug (that was previously used in the external reservoir return bulkhead) for use in the **OVERFLOW** bulkhead fitting by wrapping the NPT threads with PTFE tape.
 - Slowly turn the **FILL/DRAIN** valve to the **OPEN** position.
 - Plug the **OVERFLOW** bulkhead port when gas-free oil begins to flow out.
8. **Fill the reservoir return tube:** Finish the purge process. First, ensure the TEST port is plugged. Run the **[PRIME]** function on the PPCH to cycle fluid from the reservoir supply, through the PPCH, and back out to the External Return tube.

Caution

When the PPCH is vented, the system connected to the TEST port is also connected to the External Reservoir (which is higher than the TEST port). If there is an open point in the system below the fluid level in the reservoir, fluid will run out of the system at this open point.

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