

Clif Mock

True-Cut R-Series Sample Receptacles

User Manual

Manual No. 20165019, Rev. A

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General Description

The R-Series receptacle provides for the safe, convenient storage and transportation of samples collected from the customer's pipeline. When an R-Series receptacle is used in combination with the Clif Mock M20-3 Mixing System, a sample can be collected, transported to a testing laboratory, and mixed in the same receptacle. The 304 stainless steel (316 optional) tank assembly, which is rated for 100-psi maximum pressure, inserts directly into the M20-3 Mixing System and serves as a mixing reservoir. The ability to collect, transport, and mix a sample in one reservoir eliminates water loss and helps to prevent light ends during transfers.

In addition to allowing direct hook-up to the sample probe, the R-Series receptacle is equipped with a carrying handle for transporting the contents to a laboratory for analysis. The R-Series receptacle is available in three sizes (Figure 1):

- R4-4 (1-gallon capacity)
- R8-4 (2-gallon capacity)
- R20-4 (5-gallon capacity)



Figure 1—R-Series portable receptacles (from left): R20-4 (5 gallons), R8-4 (2 gallons), and R4-4 (1 gallon).

Components of the R-Series receptacles include:

- a 316 stainless steel pressure-relief valve fixed at 5 psi
- a 316 stainless steel vacuum relief valve fixed at 1 psi
- a 316 stainless steel ¼-in. MNPT × ¼-in. MNPT manual vent valve
- a sample inlet ½-in. FQD nozzle
- a 0-to-60 back MTD 1/8-in. NPT pressure gauge
- a high level shut-off assembly to prevent overfilling
- a ¾-in. FQD nozzle (mixing discharge)
- a ¾-in. FQD nozzle (suction)

Installation and Operation

Use the following procedure to collect and transport a sample from the field to a laboratory.

1. Connect the sample fill line from the sample probe to the ½-in. sample inlet connection at the top of the receptacle via a shut-off valve (supplied by customer).
2. Start the drive motor on the sample probe.
3. After the sample is taken, stop the drive motor on the sample probe.
4. Close the shut-off valve.
5. Uncouple the fill line from the receptacle and cover the inlet with a dust cover.
6. Transport the receptacle to the laboratory.
7. Empty the sample from the receptacle via the ¾-in. FQD connection at the base of the receptacle, or connect the receptacle to the M20-3 mixing system (Figure 2). Detailed instructions for mixing a sample are provided in the M20-3 Mixing System manual.

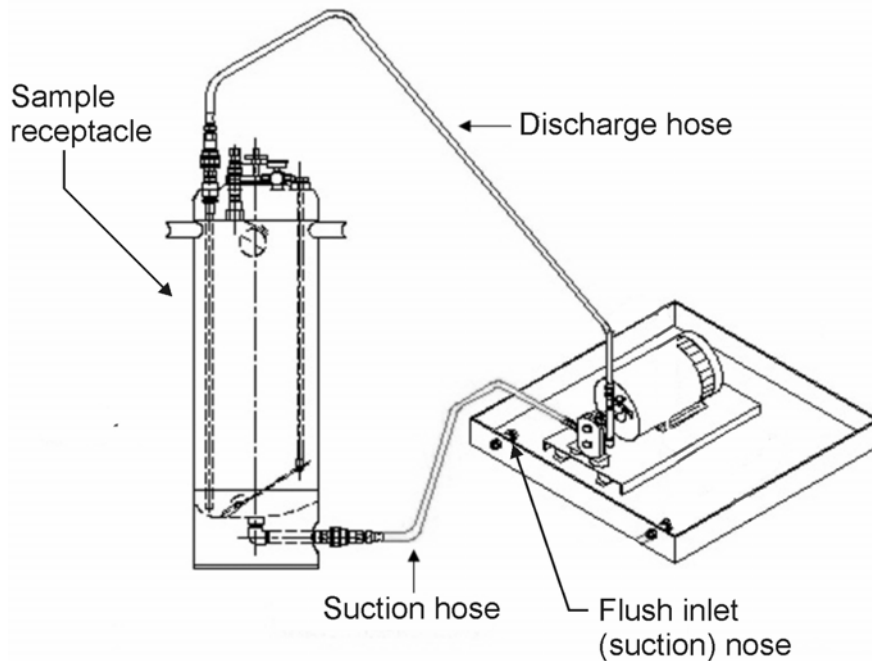


Figure 2—Hose connections for mixing a sample inside the receptacle with the M20-3 mixing system

Maintenance

Perform the following maintenance after each use of the R-Series receptacle.

1. After all the sampled liquid is withdrawn from the receptacle, clean the receptacle tank, the inlet, and the discharge with a solvent to prevent contamination of subsequent samples.
2. After the sample has been drained from the receptacle, inject the cleaning solvent through the fill line to clean the line, the sample inlet, and the high level shut-off.
3. Remove the lid from the receptacle. Taking care not to damage the high level shut-off assembly, wash the inside of the receptacle with the solvent. Flush the solvent through the 3/4-in. FQD connection at the base of the receptacle.
4. Dry the inside of the tank.

Trouble Shooting

Pressure Venting

If the high level shut-off has stopped the flow to the receptacle and the pressure gauge does not return to "0" psi when the manual valve is opened, use extreme caution in opening the lid. The valve may be plugged or the gauge may be defective, and the receptacle may still be pressurized.

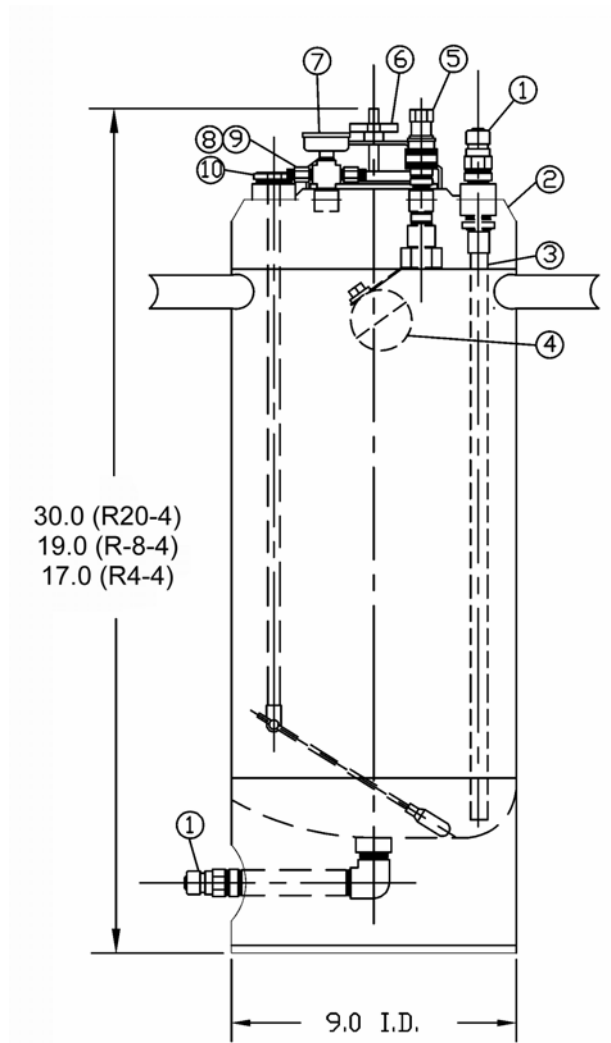
- If pressure escapes from the receptacle, the manual vent valve is faulty and must be replaced.
- If there is no noticeable pressure escape, the pressure gauge is faulty and must be replaced.

Plugging

If the sample from the pipeline is not accumulating in the receptacle, check the following areas for possible plugging.

- **Sample Probe.** If there is no sample discharge when the fill line is removed from the sample probe, remove the probe and clean it. Refer to the repair procedure for the appropriate sample probe.
- **Fill Line.** If there is no sample discharge when the fill line is disconnected from the quick disconnect coupling, remove the fill line from the sample probe. If there is sample discharge at this point, the fill line is plugged; take steps to clean or replace it.
- **Sample Inlet Nozzle.** If there is no sample discharge when the quick disconnect assembly is removed from the receptacle lid, disconnect the fill line from the coupling. If there is sample discharge at this point, the sample inlet nozzle (quick disconnect nose and/or coupling) is plugged; take steps to clean or replace it.
- **High Level Shut-Off.** Stop the drive motor on the sample probe and open the manual vent valve to release pressure. Detach the ½ in. quick disconnect nose from the receptacle lid and unscrew the lid from the tank. Reconnect the ½-in. quick disconnect nose to the receptacle lid. Start the sample probe drive motor and watch for sample discharge.

If the sample is not being discharged, remove the quick disconnect coupling, unscrew the nose from the receptacle lid, and insert the nose back into the quick disconnect coupling. If sample is discharged from the nose, disassemble the high level shut-off assembly and clean it.



BILL OF MATERIALS

ITEM	QTY	PART NO.	DESCRIPTION
1	2	50142310075	¾" Nose, QD
2	1 (select from 3 sizes)	50142733002	R4-4 Tank, 304 SS
		50142381872	R8-4 Tank, 304 SS
		50142381770	R20-4 Tank, 304SS
3	1	50142302204	Downcomer, Tube 1.2", SS
4	1	50142311046	High Level Shut-off
5	1	50142310079	½" Coupler, QD
6			Vacuum Lid
7	1	50142381040	Gauge, 0-60 psi, SS
8	1	50142200334	Pressure Relief Valve, 5 psi
9	1	50142303543	Vacuum Relief Valve, 1 psi
10	1	50142310029	Level Gauge

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