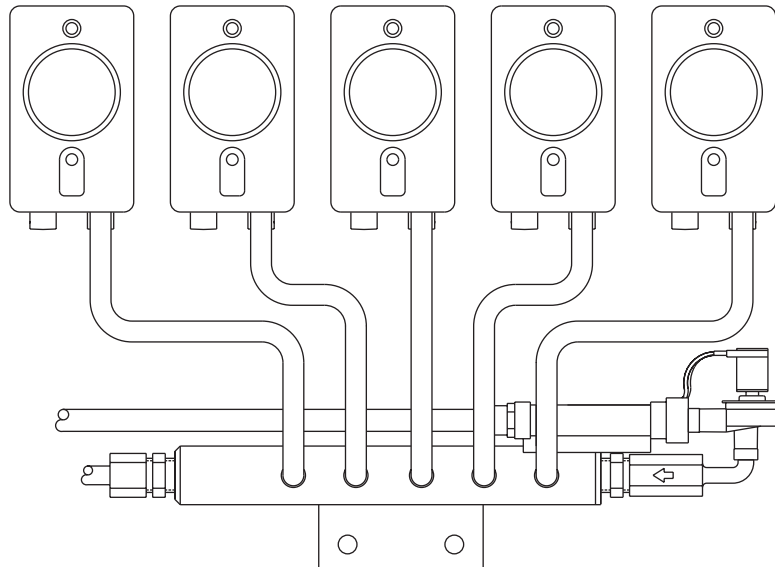


NOVA CONTROLS
LEADING THE WAY
A Hydro Systems Company

FLUSH MANIFOLD

FOR LIQUID LAUNDRY SUPPLY SYSTEMS



REFERENCE MANUAL

FM-200 Series

1.0 DESCRIPTION

The FM-200 series Flush Manifold is intended for use with our LM-200 series Eclipse liquid laundry dispensing systems.

The FM-200 series Flush Manifold is a single unit that includes the water valve, manifold, and optional flow switch all in one convenient assembly. The FM-200 series Flush Manifold is designed to provide the easiest and most cost effective means of flushing liquid laundry products when used with an Eclipse LM-200 series dispensing system.

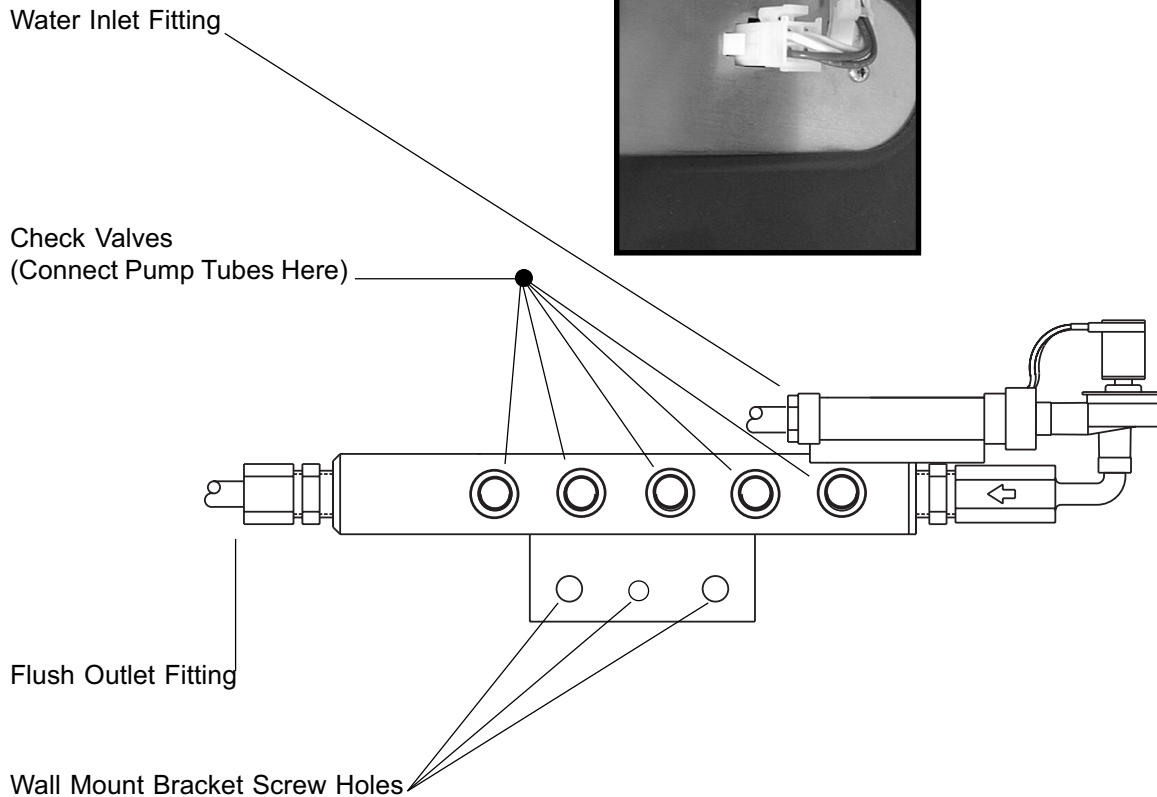
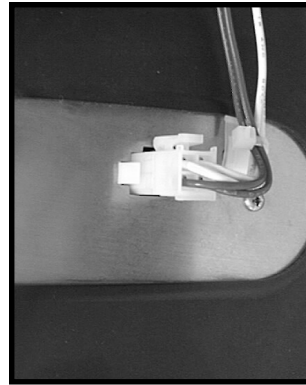
Two versions of the FM-200 series Flush Manifold are available. The options are with, or without, the flow switch.

WARNING: Installations that use the version without the flow switch should not run bleach and sour into the manifold. One of these products must be directly fed to the washer or a separate manifold must be used.

1.1 Theory of Operation

The FM-200 series Flush Manifold transfers liquid laundry chemical products from the dispensing system to the washer using water flow (or flush) via a single discharge tube. The dispenser pumps into the manifold via the check valves. The flush valve controls water flow through the manifold which in turn transfers product to the washer. The flush valve may be controlled by our LM-200 series Eclipse Controllers, or by our LM-100 series Orion dispenser using an Orion E series controller (this limits the LM-100 dispenser to five pumps) with our Flush Interface Kit (Nova Controls P/N 13-04830-00) and a step-down transformer.

Pumpstand Flush Connector



NOTE: Version shown includes optional Flow Switch.

2.0 INSTALLATION

The FM-200 is designed to be installed directly underneath the LM-200 Eclipse dispensing system Pumpstand. Electrical installation simply requires connecting a plug connector to the underside of the LM-200 Eclipse Pumpstand.

CAUTION: A locally approved back-flow prevention device—not provided—is required for safe and legal operation. A water pressure regulator is required to limit flow pressure in the flush manifold to 10 psi at flow. This regulator may be shared by a number of flush manifolds. It is important that the flush discharge hose DOES NOT exceed 50'.

2.1 Mechanical Installation

- 2.1.1 Position the FM-200 on the wall below the dispenser Pumpstand with the water inlet and flush discharge fittings on the desired end.
- 2.1.2 Using a pencil, outline each of the three holes on the FM-200 mounting bracket.
- 2.1.3 Drill the outlined holes with a 1/4" masonry bit and place a wall anchor, supplied, into each hole.
- 2.1.4 Secure the Manifold assembly to the wall anchors with supplied screws.
- 2.1.5 Connect water inlet and flush outlet hoses.

NOTE: Water inlet fitting size is 1/4" hose barb (1/4" ID hose). Flush outlet fitting size is 1/2" hose barb (1/2" ID hose). To connect other size/type water inlet and/or flush outlet hoses, obtain fittings locally.

2.2 Pump Tube Connection

Use the longer Pump Tubes provided in the accessory kit. Install these longer tubes with the excess on the discharge (right) side of the pump. Trim to fit if required, and connect to FM-200 check valve hose barbs. Use tie wraps to secure at check valve.

NOTE: When ordering replacement pump tubes for FM-200 series dispensers with flush manifolds, be sure to specify that you require the longer length (1.5' long) pump tubes. The part number for these tubes ends in a "3." (I.E. 03-03109-643 for EPDM, -243 for Santoprene, and -143 for Silicone.)

2.3 Hard Copper Plumbing

If the water supply connection must be copper tubing, you will be responsible for the correct pipe fittings and connectors to complete the installation. Always use an approved Back Flow Prevention Device and Water Pressure Regulator. Hose barb fittings can be removed and replaced with the appropriate fittings to accommodate copper tubing. Use RTV sealant on the plastic plumbing threads and DO NOT solder to fittings that are threaded into plastic.

2.4 Electrical Connection

The FM-200 series flush manifold has a single electrical connector specifically designed to connect to the Eclipse LM-200 series Pumpstand.

WARNING: DO NOT connect any voltage other than 24 VAC to the solenoid coil! For applications that only have a higher voltage available, i.e. Orion LM-100 series systems, you must use a step-down transformer to drop the flush output voltage to 24 VAC.

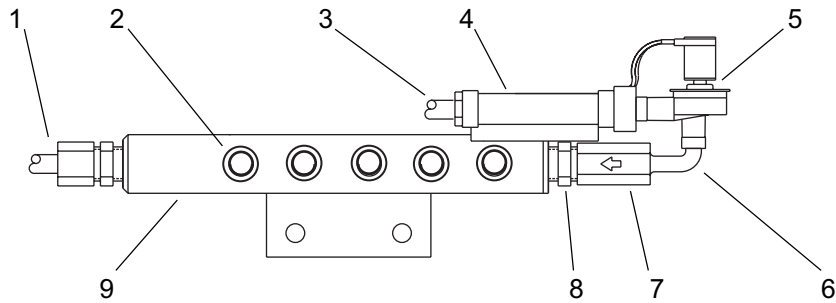
Depress locking tab on LM-200 Pumpstand shorting connector (connected to flush connector on non-flush units) and remove. Retain for reuse in case the Pumpstand is used without flush in the future! Connect the FM-200 connector to the Pumpstand flush connector.

3.0 SYSTEM SETUP

Check entire dispensing system for correct electrical and plumbing connections. After pump calibration and formula programming, test run the system to determine appropriate flush time setting to transfer all product to the washer. Input new flush time in program mode of the Controller. Also, reconfirm that the washer calls for product at appropriate times and the dispensing system pumps when it should. Flush system pressures should be measured while flushing if possible. Adjust the water pressure regulator for no more than a 10 psi reading while flushing. Inspect flush system for water leaks, and test run a load of linen.

NOTE: To manually open flush valve, to purge or clean water lines and manifold, use the Prime Pumps function of the Eclipse Controller. If no product delivery is required, use an unused pump position or temporarily remove the pump tube.

4.0 SPARE PARTS LISTING



Ref. #	Description	Part Number
1	Flush Outlet Fitting, 1/2" MPT x 1/2" Barb	41-04996-01
2	Check Valve, 3/8" Barb x 1/4" MPT	41-04207-46
3	Water Inlet Fitting, 1/4" MPT x 1/2" Barb	41-06473-84
4	Flow Switch w/1/4" FPT fittings, and Wire Harness	13-06592-00
5	Solenoid Valve, 24 VAC	49-06472-00
6	Elbow, 1/4" MPT x 1/4" FPT	41-06924-44
7	Check Valve, 1/4" FPT x 1/4" MPT	41-06508-44
8	Reducer, 1/2" MPT x 1/4" FPT	41-03965-072
9	Manifold, blank, no parts	27-04412-01
*	Hole Plug (for empty Check Valve Positions)	41-04468-00

* denotes item(s) not shown.

Limited Warranty

SELLER warrants solely to BUYER the Products will be free from defects in material and workmanship under normal use and service for a period of one year from the date of completion of manufacture. This limited warranty does not apply to (a) hoses; (b) and products that have a normal life shorter than one year; or (c) failure in performance or damage caused by chemicals, abrasive materials, corrosion, lightning, improper voltage supply, physical abuse, mishandling or misapplication. In the event the Products are altered or repaired by BUYER without SELLER'S prior written approval, all warranties will be void.

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