

# Remote Manifold for ProMix™ Easy and Xtreme Mix™ 185

310676 rev.A

## Part No. 248397

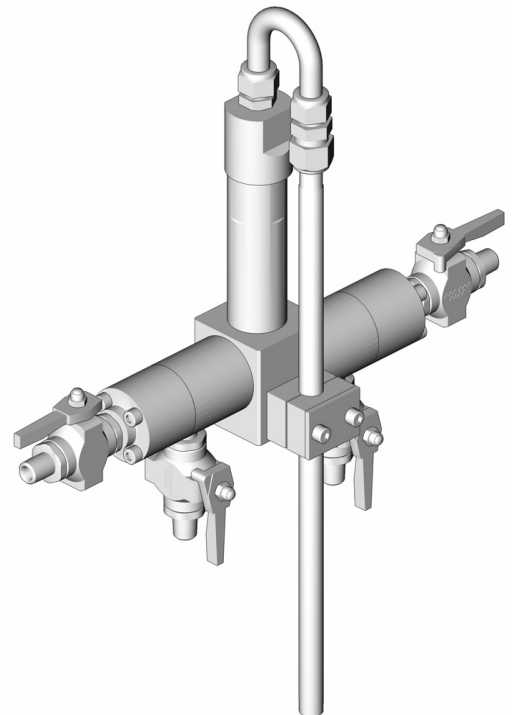
*5000 psi (35 MPa, 350 bar) Maximum Working Pressure*



Read warnings and instructions in the ProMix Easy operation manual 309908 or the Xtreme Mix 185 operation manual 310665.



The remote manifold consists of part no. 248397. All other parts referred to in the following procedure are parts you remove from the standard manifold and reuse, or parts the installer must supply.





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# Installation


1. Flush system (see proportioner operation manual).
2. Relieve pressure (see proportioner operation manual).
3. Remove screws (B, C) and take the integrator assembly (A) off the proportioner mix manifold (M). See **Parts**, page 5. Keep the integrator assembly for reuse.
4. Install the remote manifold body (1) from the kit onto the proportioner where the integrator assembly was removed, using the screws (B, C). See FIG. 1.
5. Assemble the remaining parts of the remote manifold kit to the integrator assembly (A) removed in step 3, as shown on page 5.
6. Mount the integrator assembly/remote manifold as desired, using the 1/4-20 mounting holes in the rear of the integrator assembly block.

**WARNING**







Use only high pressure fluid hoses rated to withstand the maximum working pressure of the proportioner. See proportioner operation manual.

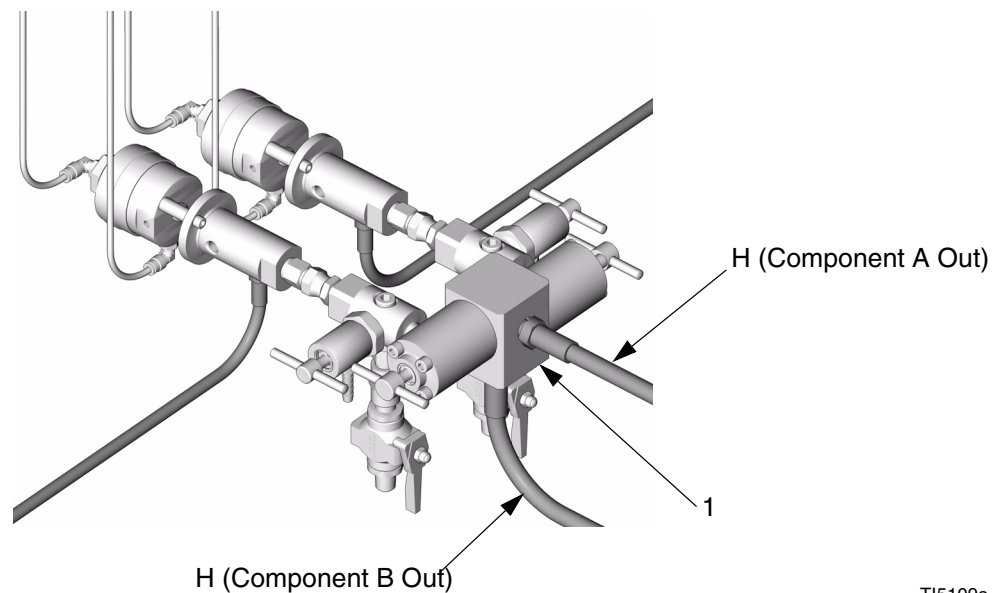
7. Connect fluid lines (H) between the remote manifold body (1, FIG. 1) and the remote manifold assembly, see **Parts**, page 5. Select appropriate fittings and fluid line sizes and lengths.

 Balance pressure drops in the two fluid lines as instructed on page 3 to ensure an accurate mix ratio.

**WARNING**

The remote manifold must be grounded. Use electrically conductive hoses to remote manifold or ground through mountings.



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**FIG. 1. Remote Manifold Body Installed on Proportioner**

# Balancing Back Pressure

Flow rates and/or viscosity differences between component materials can create different pressure drops from the proportioner to the manifold, causing unequal back pressure. This will effect mix ratio accuracy.

## To calculate pressure loss:

$$\text{Pressure Loss} = \frac{0.000273 \times Q \times V \times L}{D^4}$$

Q = Flow (GPM)

V = Viscosity in centipoise

L = Length of pipe in feet

D<sup>4</sup> = Pipe diameter (in inches) to the 4th power

*Example:* If you need to pump 1 gpm of high solids paint (40 seconds in a Zahn #2 cup = 100 cp) 100 ft. in a system using 1/4" pipe (0.364 in. ID):

$$\text{Pressure Loss} = \frac{0.000273 \times 1 \text{ gpm} \times 100 \text{ cp} \times 100 \text{ ft.}}{.018}$$

Pressure Loss = 152 psi

## Reduce pressure loss by using:

- Large diameter pipe or tubing
- Constant tubing or pipe size
- Long runs without bends
- Long radius elbows

You can balance differences in component back pressure by adjusting hose diameter and length.

$$D^4 = \begin{array}{l} .018 \text{ for } 1/4" \text{ pipe} \\ .06 \text{ for } 3/8" \text{ pipe} \\ .15 \text{ for } 1/2" \text{ pipe} \end{array}$$

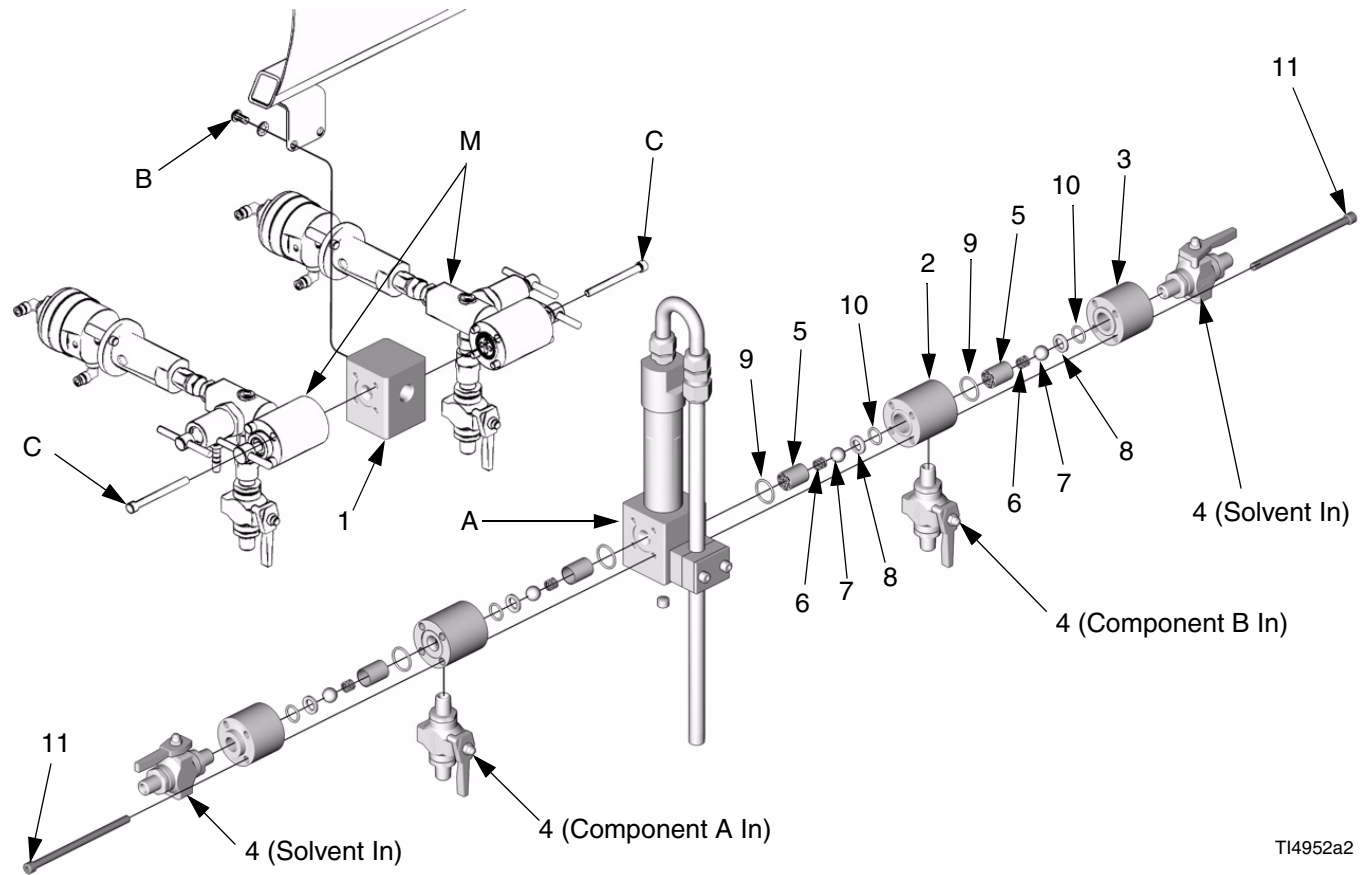
Using the previous example  
(.000273 x 1 x 100 x 100 = 2.73):

Pressure drop: 1/4" pipe = 152 psi  
3/8" pipe = 46 psi  
1/2" pipe = 18 psi



Handwriting practice lines consisting of multiple horizontal lines for text entry.

# Parts



TI4952a2

Ref. No.	Part No.	Description	Qty.	Ref. No.	Part No.	Description	Qty.
1	15D815	BODY, remote manifold; sst	1	7	105445	BALL; sst	4
2	15D813	HOUSING, ball valve; sst	2	8	196832	SEAT, lapped; carbide	4
3	15D811	HOUSING, ball valve; sst	2	9	110135	PACKING, o-ring; TFE	4
4	248271	VALVE, ball; sst	4	10	104319	PACKING, o-ring; TFE	4
5	15D312	BUSHING, ball guide; nylon	4	11	113194	SCREW, cap, socket-head; 1/4-20 x 3-1/2 in. (89 mm)	8
6	117558	SPRING, compression; sst	4				

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Printed in USA 310676A

04/2004