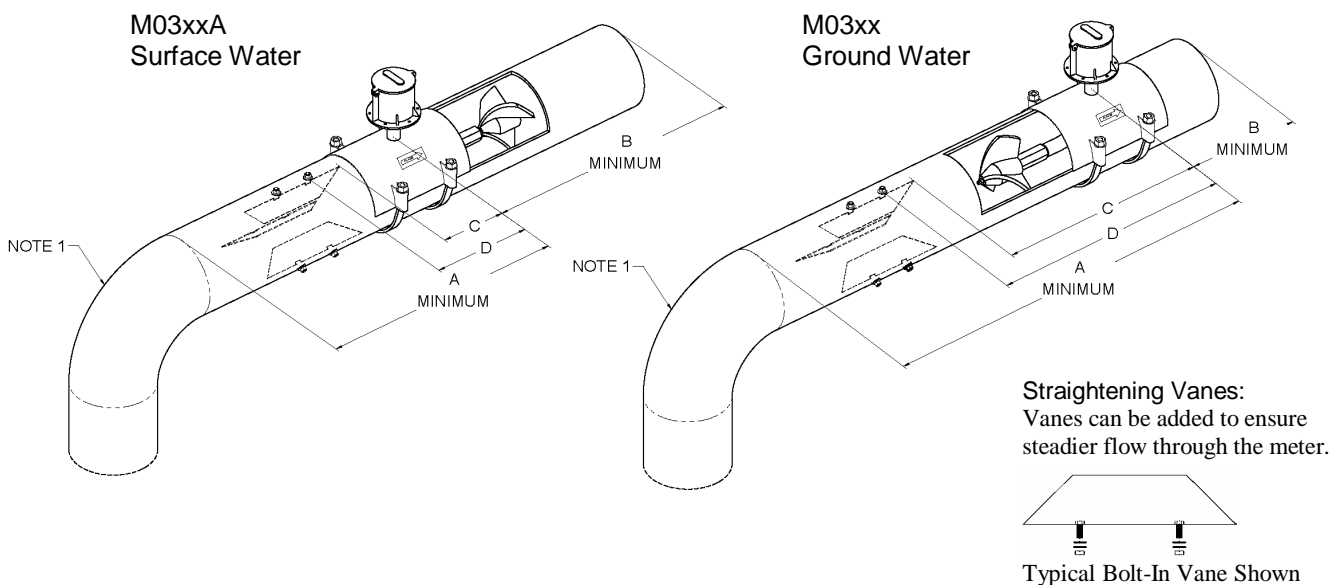


FLOWMETER POSITIONING GUIDELINES

M0304, M0306, M0308, M0310, M0312

M0304A, M0306A, M0308A, M0310A, M0312A

Proper meter installation is the first step to ensure excellent meter performance. Consult an authorized service representative or the factory for any circumstances encountered which are not covered in this instruction.



Recommended Minimum Up and Down Stream Run (inches)

Model	Nominal Size	No Vanes		With Vanes		C Inch	D Inch	Straightening Vanes	
		A Inch	B Inch	A Inch	B Inch			Bolt-In Part No.	Weld-In Part No.
M0304	4	40	8	20	8	11.5	12.5	T0835-00	T0816-00
M0306	6	60	12	30	12	15	17.5	T0836-00	T0817-00
M0308	8	80	16	40	16	15	19	T0837-00	T0818-00
M0310	10	100	20	50	20	15	19	T0838-00	T0819-00
M0312	12	120	24	60	24	15	19.5	T0839-00	T0820-00
M0304A	4	32	20	12	20	4	5	T0835-00	T0816-00
M0306A	6	48	30	18	30	4	6.5	T0836-00	T0817-00
M0308A	8	64	40	24	40	4	8	T0837-00	T0818-00
M0310A	10	80	50	30	50	5	9	T0838-00	T0819-00
M0312A	12	96	60	36	60	5	9.5	T0839-00	T0820-00

Table 1

Note 1: Elbow shown is a typical upstream piping component.

Other piping components can include: pumps, valves, expansions and reductions.

Note 2: Vane position dimensions are typical minimum distances. Dimension 'C' applies to all vane types.

Dimension 'D' applies to McCrometer Bolt-In Vanes only.

FLOWMETER POSITIONING GUIDELINES

M0304, M0306, M0308, M0310, M0312

M0304A, M0306A, M0308A, M0310A, M0312A

Flowmeters are velocity sensing devices and are vulnerable to certain upstream disturbances. Meters require lengths of straight pipe runs before and after the meter. Upstream piping components such as single elbows, valves, pumps, and changes in pipe diameter are typical. The uneven flow created by these items can vary with each system.

The recommended minimum distances from flow disturbances are listed in Table 1 and 2. If your application provides for more than the minimum upstream run, use the available distance. If your system provides less than the minimum distance McCrometer recommends installing straightening vanes.

Vanes are recommended when there are swirl generating piping components such as:

- two upstream elbows “out of plane” (image at right)
- centrifugal sand separator
- eccentric reductions



Recommended Minimum

Up and Down Stream Run (Diameters)

Model	No Vanes		With Vanes	
	A Dia	B Dia	A Dia	B Dia
M0300	10	2	5	2
M0300A	8	5	3	5

Table 2

The term “diameters” is often used in our literature as a standard which can be applied to any pipeline size. For example, if the requirement for a 6 inch pipe is 10 diameters upstream then $10 \times 6 = 60$ ” of straight pipe upstream. Table 2 is shown in diameters.

OTHER INSTALLATION CONSIDERATIONS:

- All propeller flowmeters are calibrated for a full pipeline. If the pipe is not completely full, the flowmeter will over register the flow. Although a minimum line pressure is not necessary for an accurate measurement, a full pipe is necessary.
- McCrometer flowmeters can be mounted either horizontally or vertically. Although most applications are horizontally oriented, mounting the meter vertically actually offers some slight advantages. One reason is that gravity has a more pronounced flow conditioning effect with lines in the vertical (as opposed to horizontal) orientation. The intended configuration of the meter must be specified when ordering.
- With the meter installed, check the rate-of-flow indicator. It should be stable to the point that it can be easily read. Some movement is normal, but if the indicator is moving erratically back and forth, disturbances exist and meter accuracy decreases. If you suspect a problem, please refer to the user manual and if needed contact the factory.