QFM

Installation & Setup Guide

DE1548 INT issB s1 July 2012

Contents

Safety

Always wear the required Personal Protective Equipment (including gloves and goggles that must be worn when potentially exposed to any hazardous materials and when carrying out hazardous work tasks). Turn the dispenser off during cleaning and note that parts may be contaminated with product. If possible, flush tubing out with water prior to carrying out any maintenance. For information on products that are used in this dispenser, please carefully read the product label and Material Safety Data Sheet (MSDS).

Installation Standards

Ensure that the unit is always installed in accordance with the Diversey "General Standards of Installation" guide (Ref. JDE1537) and meets local regulatory requirements.

Any specific installation recommendations relating to this unit are explained in this Installation and Setup Guide.

Specifications

Dimensions/Weight

Height	Width	Depth	Weight
21.5 cm	10.25 cm	10 cm	0.5 Kg
8.46 in	4.03 in	3.94 in	15 oz

(Dimensions do not include fitting or solution "break" tube)

Operating Parameters

	Working Pressure		Temp	Dilution for water thin chemical at 2.5bar		Flow Rate		
	Min	Max	Max	Min	Max	Min	Max	Nominal
Low Flow A-Gap*	1.0 bar (14.5 PSI)	5.5 bar (80 PSI)	65°C (149°F)	3.2:1	560:1	3.2 l/m @ 1 bar (14.5 psi) 0.85 GPM	8 l/m @ 5.5 bar (80 psi) 2.1 GPM	5.3 l/m @ 2.5 bar (36 psi) 1.4 GPM
High Flow A-Gap*	1.0 bar (14.5 PSI)	5.5 bar (80 PSI)	65°C (149°F)	5:1	800:1	7.8 l/m @ 1.0 bar (14.5 psi) 2.1 GPM	19.6 l/m @ 5.5 bar (80 psi) 5.2 GPM	12.9 l/m @ 2.5 bar (36 psi) 3.4 GPM
Low Flow R-Gap	1.5 bar (22 PSI)	5.5 bar (80 PSI)	65°C (149°F)	2.7:1	490:1	2.6 l/m @ 1.0 bar (14.5 psi) 0.68 GPM	5.3 l/m @ 5.5 bar (80 psi) 1.4 GPM	3.6 l/m @ 2.5 bar (36 psi) 0.95 GPM
High Flow R-Gap	1.5 bar (22 PSI)	5.5 bar (80 PSI)	65°C (149°F)	5:1	800:1	5.5 l/m @ 1.0 bar (14.5 psi) 1.5 GPM	17.7 l/m @ 5.5 bar (80 psi) 4.68 GPM	12.3 l/m @2.5 bar (36 psi) 3.25 GPM

Installation

Open the QFM by inserting the "C"- shaped steel clip into the front cover then lift cover upward. The cover will only come away completely from the backplate when it is pulled up by an angle of 45°. (*Fig 1.1*)

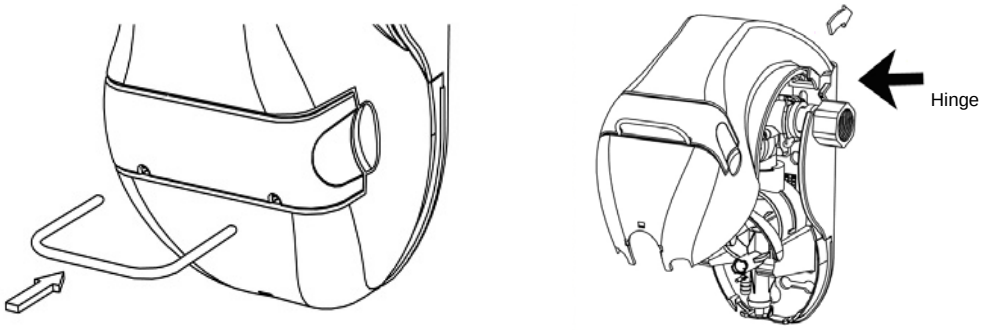


Fig 1.1

Remove cover and then the wishbone from backplate towers. *(Fig 1.2).*

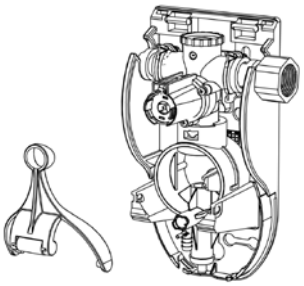


Fig 1.2

Press the clip on the backplate inwards to release the proportioner from the backplate. Lift the proportioner out of the mounting plate, and remove it from the enclosure (*Fig 1.3*).

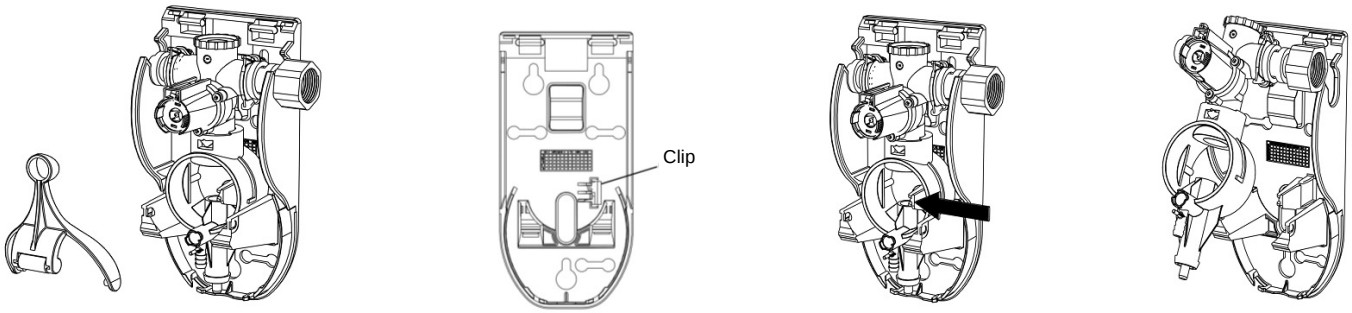


Fig. 1.3

Position the QFM vertically on the wall and drill three holes for either the horizontal mounting slots or the keyholes. Use the horizontal mounting slots for hard-plumbed installations as they allow the unit to slide 25mm from side to side when connecting or disconnecting from the water fitting. Use the keyholes when using a flexible water supply line. (*Fig 1.4*)

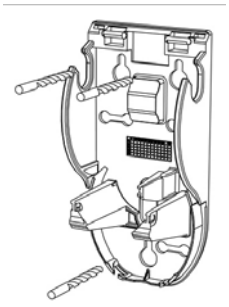


Fig 1.4

Connect water supply. If necessary, swap the water inlet from the right side to the left as follows:

***NOTE**: Water supply should have an isolating valve in close proximity to the unit.*

Pull outward the blue plastic retaining clips on the far left and far right (*Fig 1.5*).

***NOTE**: The clips do not require to be fully pulled out.They are designed to be permanently connected to the valve to avoid misplacement.*

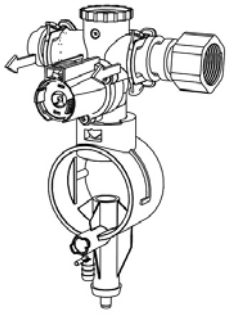


Fig 1.5

Pull water inlet fitting out of the right side and the plug from the left side, reinserting them in the opposite ends. (*Fig 1.6*)

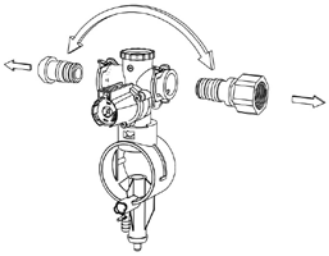


Fig 1.6

Push in the blue plastic retaining clips. (*Fig 1.6*)

***CAUTION:** This must be performed BEFORE the water pressure is switched back on for full strength to be achieved.*

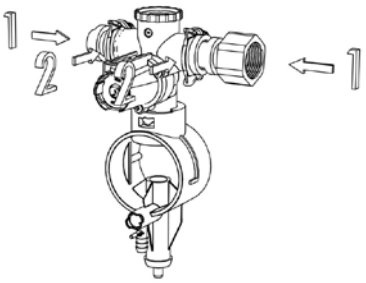


Fig 1.6

Lower the proportioner back into position on the mounting plate. Attach wishbone arm.

Connecting Tubing

High Flow

Connect the discharge tube to the large barb, (*Fig 1.7*) and secure onto barb with tie wrap. Attach the Pick-up tube.

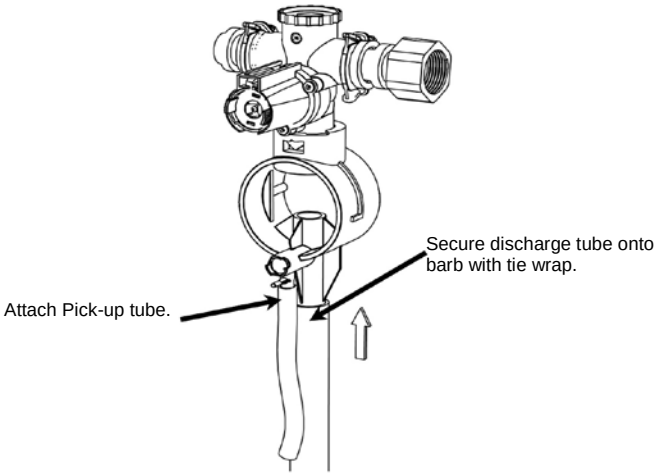
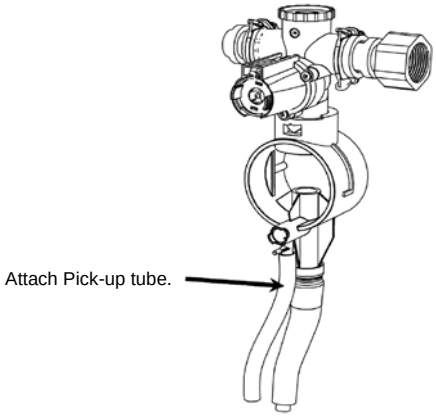


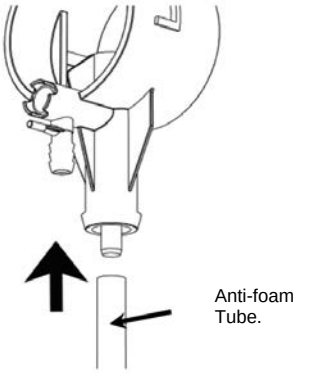
Fig 1.7

Low Flow

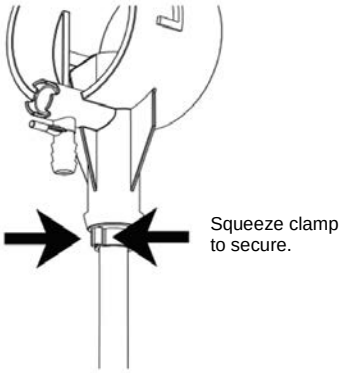
NOTE: *The anti foam tube is only required on Low Flow Air Gap version.*



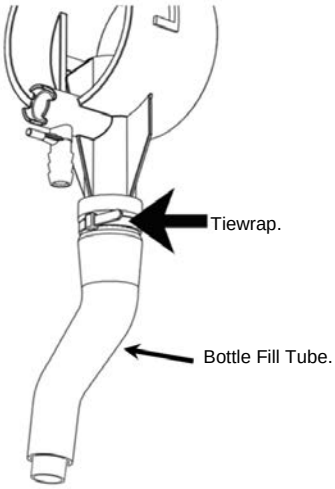
(Figure 1.8 above) Low Flow Air-Gap version.



Attach anti-foam tube to spigot on the end of the eductor.

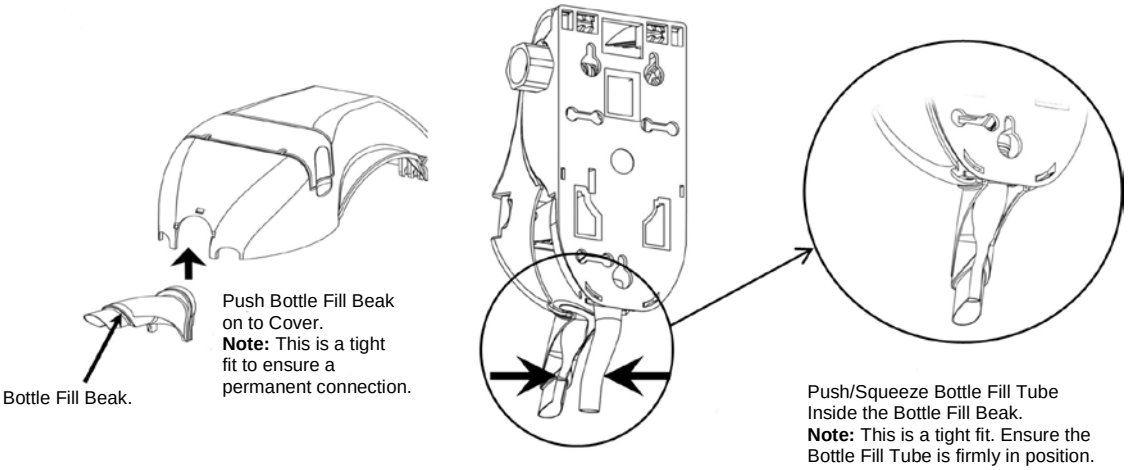


Ensure Anti-Foam tube is securely fixed with clamp provided.

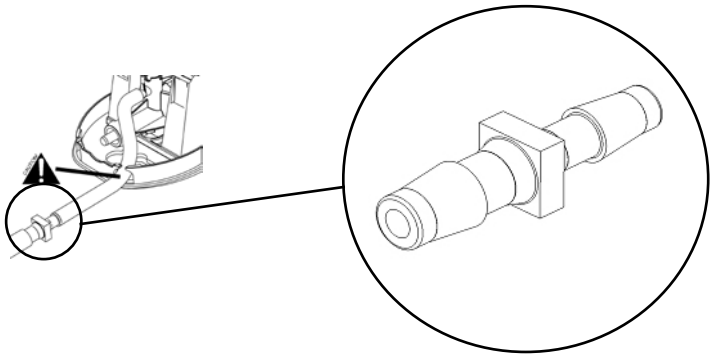


Attach the Bottle Fill Tube using the supplied tiewrap and secure to Eductor Body.

Connect chemical pick-up tubing to the small barb as shown earlier *(Fig 1.8).*



CAUTION: *When attaching the pick-up tube, a longer tube may be required than supplied. If a longer tube is required ensure that the inside diameter is no smaller than 6mm and should ideally be 10mm, especially if the product is viscous. A 6/10mm adapter is available from JDE for this purpose.*



6mm ID 30m coil
10mm ID 30m coil
Adapter 20pk
(See Spare parts guide for part numbers).

NOTE*: It is extremely unlikely that you will have to disconnect the chemical lines, as the unit can be serviced with the lines connected.*

Place the ceramic weight over the end of the chemical pick-up tube and then insert the footvalve. It is important to add the footvalve, because without it the tube will lose prime when the system is not in use. This will result in weaker solutions than those specified in the next table.

Turn on the water supply to the unit.

Insert the A-D metering peg in as shown, with the “A” facing down (*Fig 1.9*). Hold down the wishbone long enough to fill the pickup tube with chemical.

Figure 1.9 Inserting Metering Peg, “A” Facing Down

Setup

Select the metering peg that offers the desired dilution, using the following chart for reference. Place the letter that is the desired setting at the bottom, where the index pin holds the metering peg in place.

Actual ratios and flow rates will vary depending on water pressure, chemical viscosity, the length of the pickup line, the height of the unit from the floor and the level of product in the drum.

After selecting the peg setting, calibrate the dilution ratio to be sure it meets your requirements.

	High flow units (Blue)			
	A Gap @ 1.0bar	R Gap @ 1.5bar	A/R Gap @ 2.5bar	A/R Gap @ 4.5bar
A	5.8%	15.6%	16.7%	15.9%
B	12.2%	14.9%	15.2%	14.3%
C	11.1%	13.2%	13.3%	12.0%
D	4.8%	6.3%	5.3%	4.5%
E	3.8%	5.3%	4.5%	3.7%
F	3.2%	3.8%	3.6%	2.9%
G	2.8%	3.2%	3.0%	2.4%
H	2.2%	2.8%	2.7%	2.1%
I	2.0%	2.4%	2.4%	1.8%
J	1.5%	1.9%	1.9%	1.5%
K	1.0%	1.3%	1.3%	1.0%
L	0.8%	1.0%	1.0%	0.8%
M	0.6%	0.8%	0.8%	0.6%
N	0.4%	0.5%	0.6%	0.4%
O	0.2%	0.3%	0.3%	0.2%
P	0.1%	0.1%	0.1%	0.1%

	Low flow units (Grey)						
	A Gap @ 1.0bar	A Gap @ 1.5bar	R Gap @ 1.5bar	A Gap @ 2.5bar	R Gap @ 2.5bar	A Gap @ 4.5bar	R Gap @ 4.5bar
A	23.8%	25.6%	25.0%	23.8%	27.0%	16.1%	20.8%
B	22.7%	24.4%	24.4%	23.3%	25.6%	15.4%	20.0%
C	20.4%	21.7%	21.7%	21.3%	23.3%	14.1%	18.5%
D	9.6%	10.9%	11.4%	10.8%	12.5%	7.7%	10.3%
E	8.3%	9.1%	10.0%	9.1%	11.1%	6.7%	9.1%
F	6.3%	7.1%	7.7%	7.1%	8.3%	5.3%	7.1%
G	5.3%	5.9%	6.3%	5.9%	6.7%	4.2%	5.9%
H	4.5%	5.0%	5.6%	5.3%	5.9%	3.7%	5.3%
I	3.8%	4.8%	4.8%	4.5%	5.3%	3.2%	4.5%
J	3.2%	3.8%	3.8%	3.6%	4.2%	2.6%	3.6%
K	2.3%	2.6%	2.6%	2.4%	2.9%	1.9%	2.4%
L	1.8%	2.0%	2.0%	2.0%	2.3%	1.4%	2.0%
M	1.3%	1.4%	1.5%	1.4%	1.6%	1.0%	1.5%
N	0.9%	0.9%	1.0%	1.0%	1.1%	0.7%	1.0%
O	0.4%	0.5%	0.5%	0.6%	0.6%	0.4%	0.5%
P	0.1%	0.2%	0.2%	0.2%	0.2%	0.1%	0.2%

Calibrate the dilution ratio as follows:

Fill a measuring/graduated cylinder with chemical.

Note the amount of chemical that is in the cylinder.

Place the foot valve fully in the chemical

Turn on the proportioner, filling a measuring container jug (high flow) or a 16-oz/500 ml measuring cup (low flow).

Carefully withdraw the foot valve from the chemical and note the amount remaining. Subtract it from the initial amount to calculate the amount used.

Subtract the amount of chemical used from the amount of solution collected in the measuring/graduated cylinder to calculate the amount of water passed.

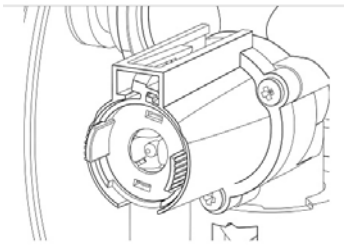
Note the amount of **water : chemical** to calculate dilution and the equivalent dilution as a percentage of chemical. If necessary, repeat with different peg setting for required dilution.

Replace the cover, starting with the top sloping backwards so the plastic tabs that connect it to the backplate are not damaged.

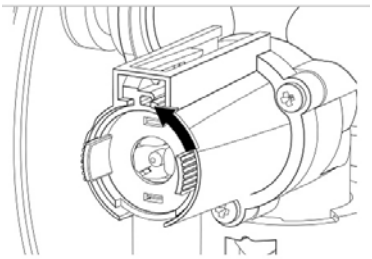
Changing from Momentary “Hold ON” to “Lock ON” activation

- Turn off water supply to unit.
- Remove cover and wishbone
- Rotate the “fingers” that protrude from the valve assembly in an anti-clockwise direction.

NOTE: *The “fingers” are quite stiff and only rotate about 10°*

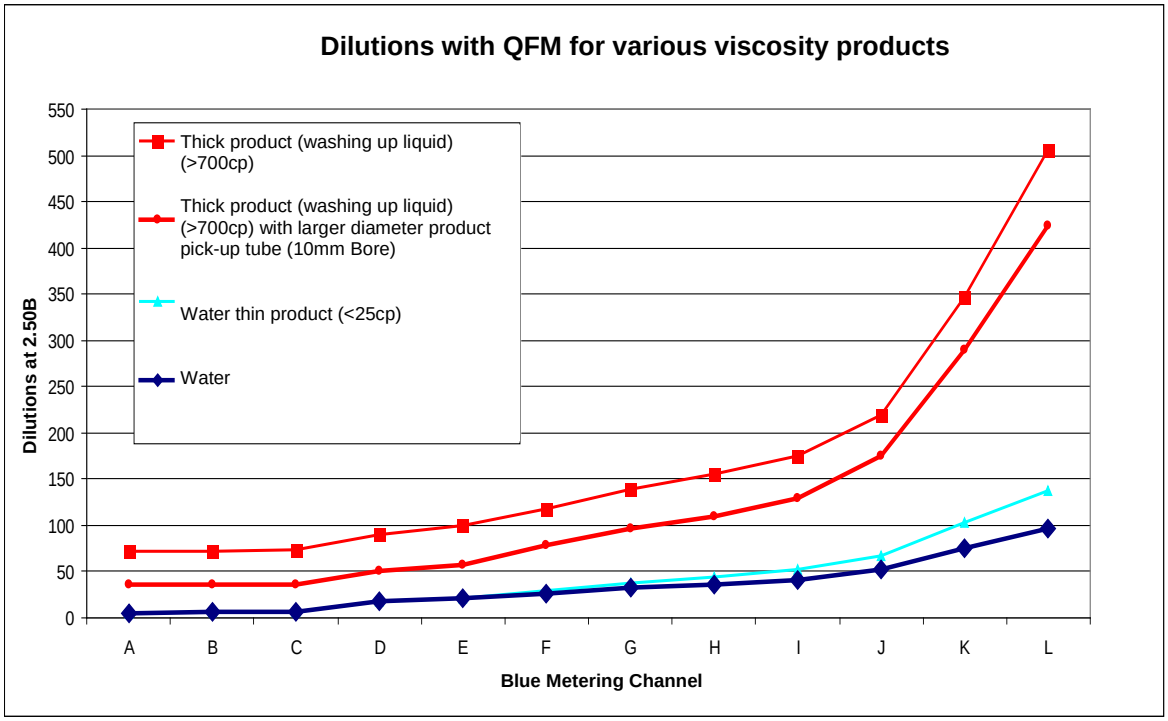


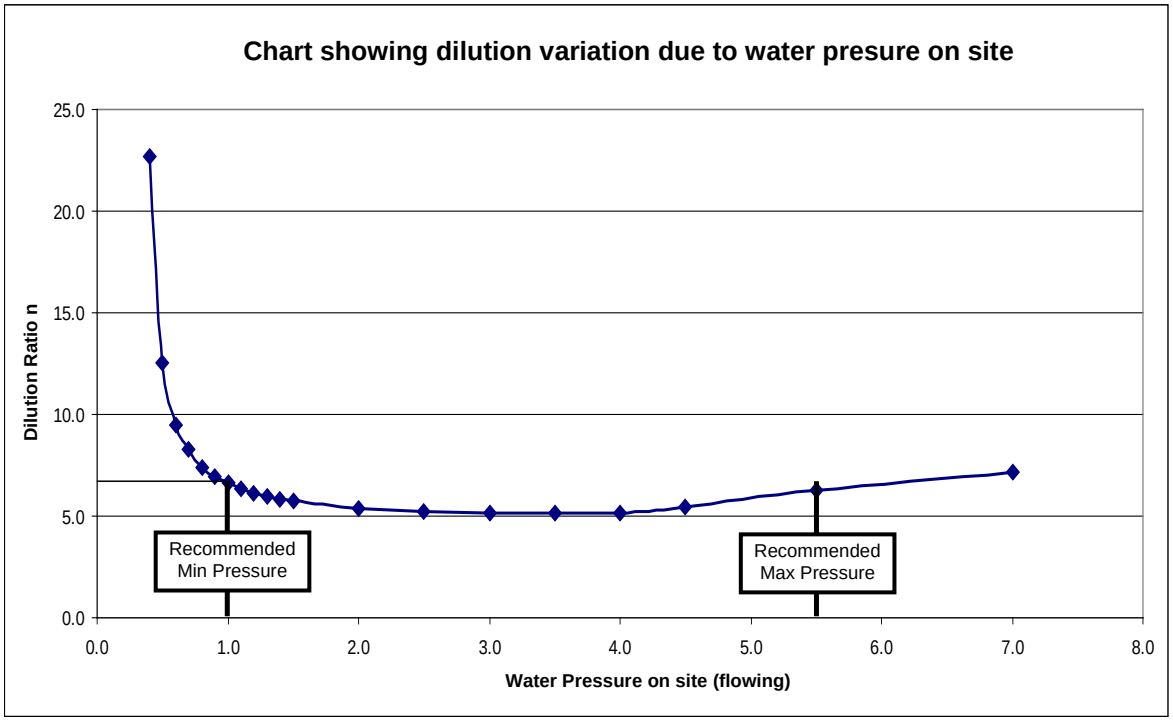
Non-Latch position



Latch on position

- Check operation by re-assembling the wishbone and checking the state of the valve when activated.
- Replace cover, turn on water and check operation.





NOTE: *Both charts are with channel A plug setting and are for illustration purposes only. The top chart indicates the effects of product viscosity on actual dilutions. The lower chart indicates the possible variation in dilution due to water pressure changes. It is recommended that laboratory work be performed to determine required dilution before installation or onsite calibration be performed.*