



OEM NFPA 1901 Foam Multi-Point Injection Proportioner Test Procedure

AccuMax Series Foam Systems

- 1) Foam pump, Line Controllers, and water flowmeters must be calibrated per Installation and Operation Manual before testing (Concentrate viscosity must be within the foam proportioner manufactures limits).
- 2) Tools needed for the test are a pitot tube or other calibrated flowmeter to test the system water flow rates. Flowmeter or other method to measure concentrate flow, a load valve to control system back pressure capable of maximum flow of the foam system pump and a pressure gauge to measure back pressure.
- 3) System performance is dependent on flowmeter/pipe size. Identify applicable OEM test points based on size of flowmeter installed. Maximum water flow is determined by the flowmeter range or the maximum water pump output, whichever is less.
- 4) Water and foam concentrate can be tested separately on FoamPro AccuMax series systems as follows:
 - A) Test waterway flowmeter at the three (3) test points shown on applicable OEM Certification test chart (If the water pump cannot reach the maximum flowmeter rate at 150psi use maximum flow rate of the pump). Water flow rates displayed on the control head should be within 10% of pitot tube measurements.
 - B) Test the Line Controllers at three (3) test points shown on OEM Certification test chart.
 - 1) Turn the "Cal/Inject" valve to the Calibrate position for the Line Controller being tested (Foam system should be primed with no air in the lines).
 - 2) Attach pressure gauge and load valve to the "cal/inject" valve with a hose running to calibrated flowmeter.
 - 3) Enter "Simulated Flow" mode and set the water flow rate to the value listed in the chart for the Line Controller size. If the foam pump minimum flow rate is greater than the Line Controller minimum flow rate, use multiple Line Controllers simultaneously to increase foam pump flow so that the Line Controller minimum flow rate can be tested.
 - 4) Set the percent (%) concentrate to the corresponding value specified in the chart.
 - 5) Press the Master and Line Controller "ON" buttons to start the proportioner.
 - 6) Set the load valve back pressure to the corresponding value specified in the chart.
 - 7) Run the system for short period (Not less than 20 seconds) to assure prime and stabilization. Note flowmeter reading. Steps 7, 8, and 9 will need to be adjusted accordingly to suit the flow meter if used.
 - 8) Run the system for several minutes. Longer run time will increase measurement accuracy.
 - 9) The result must match the corresponding Foam (GPM) listed in the chart within NFPA accuracy requirements.
(Note: NFPA allows -0% to +40% for solutions of less than 1% and -0% to +30% for solutions greater than 1%; or 1 percentage point whichever is less)
 - 10) Repeat this process for the remaining two (2) rows of the OEM Certification Test chart. All three scenarios must meet NFPA guidelines without re-calibrating.
- 5) Repeat Step 4 for each Line controller.
- 6) Test the foam pump capacity listed on the OEM Certification test chart through a Line Controller that is capable of the foam pump low end and a Line Controller that is capable of the foam pump high end. If one Line Controller cannot reach the capacity of the foam pump, multiple Line Controllers may be required to test the foam pump capacity. Call FoamPro for assistance if needed.



26 Southern Blvd. • Nesconset, NY 11767 USA
Phone 800-533-9511 • FAX 816-892-3178
www.foampro.com

AccuMax 3090

Manufacturer Type Test

OEM Certification Test

System Capacity

Range	Water PSI	Range	Foam Cap. (gpm)
Min	0	Min	6
Max	250	Max	90
Max	250	Min	6
Min	0	Max	90
Mid	125	Mid	50

Flowmeter

2" Pipe			
Range	Water PSI	Range	Waterflow (gpm)
Min	0	Min	15
Max	250	Max	520
Min	0	Max	520
Max	250	Min	15
Mid	125	Mid	60

Discharge Waterway

2" Pipe			
Range	Water PSI	Range	Waterflow (gpm)
Min	0	Min	15
Max	250	Max	520
Mid	125	Mid	160

Quantity Certified

Foam Injection Test Points

1/2" Line					
Range	Sim Flow (gpm)	Back Press. PSI	Range	Foam %	Foam Cap. (gpm)
Min	500	0	Min	0.6%	3.0
Max	500	250	Max	5.2%	26.0
Mid	500	125	Mid	3.0%	15.0

Quantity Certified

Individual Line Controllers

1/2" Line Control

Range	Water PSI	Range	Foam Cap. (gpm)
Min	0	Min	3
Max	250	Max	26
Max	250	Min	3
Min	0	Max	36
Mid	125	Mid	15

2-1/2" Pipe			
Range	Water PSI	Range	Waterflow (gpm)
Min	0	Min	20
Max	250	Max	750
Min	0	Max	750
Max	250	Min	15
Mid	125	Mid	250

2 1/2" Pipe			
Range	Water PSI	Range	Waterflow (gpm)
Min	0	Min	20
Max	250	Max	750
Mid	125	Mid	250

3/4" Line

Range	Sim Flow (gpm)	Back Press. PSI	Range	Foam %	Range	Foam Cap. (gpm)
Min	1000	0	Min	0.6%	Min	6.0
Max	1000	250	Max	6.0%	Max	60.0
Mid	1000	125	Mid	3.0%	Mid	30.0

3" Pipe			
Range	Water PSI	Range	Waterflow (gpm)
Min	0	Min	30
Max	250	Max	1150
Mid	125	Mid	375

1" Line

Range	Sim Flow (gpm)	Back Press. PSI	Range	Foam %	Range	Foam Cap. (gpm)
Min	1000	0	Min	1.0%	Min	10.0
Max	1000	250	Max	6.0%	Max	60.0
Mid	1000	125	Mid	3.0%	Mid	30.0

3/4" Line Control

Range	Water PSI	Range	Foam Cap. (gpm)
Min	0	Min	6
Max	250	Max	60
Max	250	Min	6
Min	0	Max	60
Mid	125	Mid	30

3" Pipe			
Range	Water PSI	Range	Waterflow (gpm)
Min	0	Min	30
Max	250	Max	1150
Min	0	Max	1150
Max	250	Min	30
Mid	125	Mid	375

4" Pipe			
Range	Water PSI	Range	Waterflow (gpm)
Min	0	Min	55
Max	250	Max	1980
Mid	125	Mid	625

1 1/4" Line

Range	Sim Flow (gpm)	Back Press. PSI	Range	Foam %	Range	Foam Cap. (gpm)
Min	1000	0	Min	1.0%	Min	10.0
Max	1000	250	Max	5.0%	Max	50.0
Mid	1000	125	Mid	9.0%	Mid	90.0

1" Line Control

Range	Water PSI	Range	Foam Cap. (gpm)
Min	0	Min	6
Max	250	Max	60
Max	250	Min	6
Min	0	Max	60
Mid	125	Mid	30

4" Pipe			
Range	Water PSI	Range	Waterflow (gpm)
Min	0	Min	55
Max	250	Max	1980
Min	0	Max	1980
Max	250	Min	55
Mid	125	Mid	625

5" Pipe			
Range	Water PSI	Range	Waterflow (gpm)
Min	0	Min	80
Max	250	Max	3000
Mid	125	Mid	1000

System Capacity

Range	Back Press. PSI	Range	Foam Cap. (gpm)
Min	0	Min	6
Max	250	Max	90
Mid	125	Mid	50

System Certified

1 1/4" Line Control

Range	Water PSI	Range	Foam Cap. (gpm)
Min	0	Min	10
Max	250	Max	100
Max	250	Min	10
Min	0	Max	100
Mid	125	Mid	50

5" Pipe			
Range	Water PSI	Range	Waterflow (gpm)
Min	0	Min	80
Max	250	Max	3000
Min	0	Max	3000
Max	250	Min	80
Mid	125	Mid	1000

6" Pipe			
Range	Water PSI	Range	Waterflow (gpm)
Min	0	Min	117
Max	250	Max	4500
Mid	125	Mid	1440

Type tested to all known foam concentrate viscosities

8" Pipe			
Range	Water PSI	Range	Waterflow (gpm)
Min	0	Min	200
Max	250	Max	7800
Min	0	Max	7800
Max	250	Min	200
Mid	125	Mid	2560

8" Pipe			
Range	Water PSI	Range	Waterflow (gpm)
Min	0	Min	200
Max	250	Max	7800
Mid	125	Mid	2560

Note: Optional equipment available to achieve lower concentrate flow rates. Contact FoamPro for specific test points and information.

If full flow capacity of the foam pump cannot be reached with one Line Controller selected, then combine multiple Line Controllers to test full capacity of foam pump.
If minimum flow capacity of the Line Controller cannot be reached with the AccuMax system, then combine multiple Line Controllers to test minimum capacity.