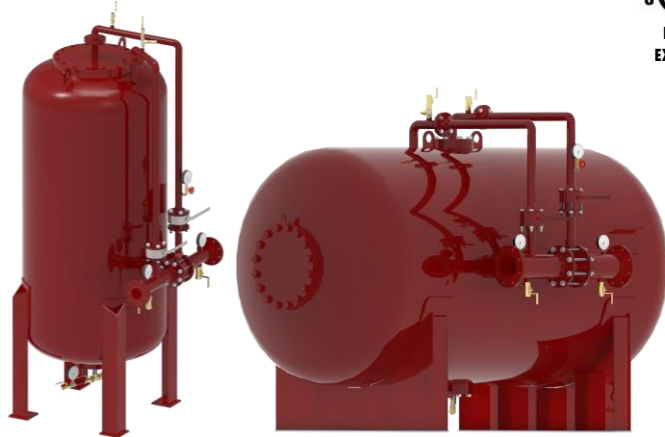


## BLADDER TANK

Model AG-TMIU

Proportioning Bladder tank system pre-piped  
Horizontal or Vertical



### PRODUCT DESCRIPTION

The Bladder Tank Foam Proportioning System model AG-TMIU is available in vertical or horizontal mounting. It uses water pressure to inject foam concentrate into water supply and automatically proportions foam concentrate over wide range of flow and pressure, with very low pressure drop. This system does not require a foam concentrate supply pump.

The system is supplied with pressure vessel, bladder, fill and drain valve for water and foam concentrate, ratio controller and vent valve. Optionally it can be supplied with foam concentrate control valve. The valve allows concentrate flow only when minimum of 2,1 bar (30 psi) water pressure is established in the system.

### TECHNICAL DATA

<b>Model</b>	AG-TMIU
<b>Concentrate Storage Capacity</b>	For Vertical Tank 140 to 7500 lt (36 to 2000 Gallon (US)). For Horizontal Tank 140 to 15000 lt (36 to 4000 Gallon (US)).
<b>Maximum Working Pressure</b>	12 bar (175 psi)
<b>Test Pressure</b>	18 bar (260 psi)
<b>Design Temperature</b>	-10°C to 50°C (14°F to 122°F)
<b>Tank Mounting Type</b>	Vertical or Horizontal
<b>Materials</b>	External piping water side: Carbon Steel External piping foam concentrate side: Stainless Steel Ratio controller: Wafer type with Stainless Steel Vessel: Carbon Steel as per ASME Code Section VII Div 1, for unfired pressure vessels Bladder: Buna-N Centre tube: Perforated PVC
<b>Finish</b>	Red RAL 3000
<b>Approvals</b>	UL

## OPERATION

When the main water flow is established and water inlet and foam outlet valves are opened, the water enters the area between vessel wall and bladder, applying pressure to the bladder. The foam concentrate is forced out of the bladder through the foam concentrate outlet pipe and into the ratio controller through metering orifice. The concentrate pressure and water inlet pressure at ratio controller will be same, as the main water supply pressure is utilized to expel the foam from the bladder. The water flowing through the ratio controller jet creates a low pressure area common both to downstream water and foam concentrate. This injects the concentrate in to the ratio controller through an accurate sized orifice proportioned to water venturi. This ensures correct proportioning over a wide range of flow condition.

In bladder system, the bladder is used as diaphragm to separate the water and foam concentrate within the tank. The foam concentrate is injected into the ratio controller utilizing water pressure.

## INSTALLATION, TESTING AND MAINTENANCE

An installation, testing and maintenance manual is provided with the equipment.

The bladder tank must be installed, inspected and tested by a qualified and trained person. An installation, testing and maintenance manual is provided with each unit. The instruction manual must be read and followed during installation and commissioning of the system.

After few initial successful tests an authorized person must be trained to perform inspection and testing of the system.

It must be inspected regularly to verify that no damages have taken place to any component and all the valves are in their proper position as per the system requirement.

The system should be tested at least once a year in accordance with applicable NFPA code or the guidelines of the organization having local jurisdiction.

## CAUTION

1. Foam concentrate filling procedure must be followed, if not the bladder can be damaged. During the filling procedure an air supply with regulator (0 to 1.0 kg/sq.cm) is required during filling procedure, to be arranged by installer / user. Water supply at 0-1.5 kg/sq.cm required for tank filling during commissioning, to be arranged by installer / user.
2. Concentrate fill pump need to be arranged by installer / user.
3. While designing a foam system, step shall be taken to allow for removal of the internal centre tube(s). The centre tubes are full length and/or height of the bladder tank.
4. Direct sunlight on the bladder tank must be avoided.
5. Do not weld on the tank as it may damage the bladder of tank.
6. Do not act on the bladder tank before relieving the pressure of the system.
7. Sight gauge is not pressure tight, so before taking concentrate level reading, tank pressure must be released.
8. A minimum length of 5 (five) times the pipe diameter of unobstructed straight pipeline should be provided at the inlet and outlet of the ratio controller, where pipe diameter is the nominal size of the ratio controller.
9. Multiple Ratio Proportioners cannot be used if it is UL Listed Bladder tank.
10. Each tank is designed & tested for specific type of foam concentrate, hence specify in order the concentrate type to be used.

## ORDERING INFORMATION

CAPACITY	POSITION		
	VERTICAL	HORIZONTAL	DOUBLE VERTICAL
200 Lts	FDM00200VU		The double vertical tank's capacity is for each tank
300 Lts	FDM00300VU		
400 Lts	FDM00400VU		
500 Lts	FDM00500VU		
600 Lts	FDM00600VU		
1.000 Lts	FDM01000VU		
1.500 Lts	FDM01500VU	FDM01500HU	FDM01500DVU
2.000 Lts	FDM02000VU	FDM02000HU	FDM02000DVU
2.500 Lts	FDM02500VU	FDM02500HU	FDM02500DVU
3.000 Lts	FDM03000VU	FDM03000HU	FDM03000DVU
3.500 Lts	FDM03500VU	FDM03500HU	FDM03500DVU
4.000 Lts	FDM04000VU	FDM04000HU	FDM04000DVU
4.500 Lts	FDM04500VU	FDM04500HU	FDM04500DVU
5.000 Lts	FDM05000VU	FDM05000HU	FDM05000DVU
6.000 Lts	FDM06000VU	FDM06000HU	FDM06000DVU
7.000 Lts	FDM07000VU	FDM07000HU	FDM07000DVU
8.000 Lts	FDM08000VU	FDM08000HU	FDM08000DVU
9.000 Lts	FDM09000VU	FDM09000HU	FDM09000DVU
10.000 Lts	FDM10000VU	FDM10000HU	FDM10000DVU
FP01200RPF03	Foam solution loading manual pump		

Specify:

Model	
Mounting type	
Storage capacity	
Quantity	
Size of ratio controller with flow and pressure	
Type of foam concentrate	
Percentage of induction required	
UL approval requirement	

## AG FIRE SPRINKLER

AG Fire Sprinkler offers a wide selection of components. Then a list of products is presented by AG Fire Sprinkler, we can offer all these components, made with precision to protect people, anywhere, anytime.

- Sprinklers
  - Standard Coverage
  - Extended Coverage
  - Storage
  - Dry
  - Accessories
- System Valves
  - Wet
  - Dry
  - Preaction Equipment
  - Accessories
- Spray System Open Nozzles
  - High Velocity Nozzles
  - Medium Velocity Nozzles
  - Window Nozzles
  - Hydroshield Nozzles
  - Mushroom Type Nozzles
- Foam equipment
  - Tanks
  - Proportioners
  - Foam Discharge Equipment
  - Foam Concentrates
- Deluge equipment for Water Spray and Foam
  - Clapper Deluge Valves
  - Diaphragm Deluge Valves
- Monitors
  - Manual Monitors
  - Remote Monitors
  - Monitor Nozzles
  - Towers and Trolleys
- Valves
  - Butterfly Valves
  - Gate Valves
  - Check Valves
  - Pressure Control Valves
  - Test and Drain
  - Hose, Hydrant and Fire Connection Valves
  - Fire Department Connections

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The equipment presented in this bulletin is to be installed in accordance with the latest published Standard of the National Fire Protection Association, Factory Mutual Research Corporation, or other similar organizations and also with the provisions of governmental codes or ordinances whenever applicable. This documentation is not contractual. AG Fire Sprinkler reserves the right to any kind of change without notice.

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