

## TP MK2 Bladder Tank Proportioner

### Description

SKUM TP MK2 proportioning systems accurately and consistently meter foam concentrate into the fire water supply to provide the designed foam solution when the system flow and pressure are within the operating range of the unit.

Each proportioner consists of a cast bronze body and metering orifice. The proportioner is available in six standard sizes ranging from DN 50 to DN 250 with flows ranging from 125 Lpm to 34,100 Lpm (33 gpm to 9,008 gpm) and is designed to fit between two DIN PN16 (ANSI Class 150) pipe flanges.

The SKUM TP MK2 Proportioner is FM Approved for use with SKUM AFFF 3% UG and SKUM ARC 3x3 UG Foam Concentrates. For other SKUM foam concentrates that have been tested for use with this proportioner, see System Specifications on page 4.

### Features

- Designed to meet the proportioning requirements of EN 13565-1 and NFPA 11
- FM Approved for use with SKUM AFFF 3% UG and SKUM ARC 3x3 UG Foam Concentrates
- Designed for bladder tank foam-water based solutions only
- Reduces the amount of system hardware and installation with minimal moving parts and no electrical components as well as reduced maintenance compared to alternative solutions
- Manufactured using corrosion-resistant design and materials
- Wafer type water connection

### Application

On system actuation, water pressure into the bladder chamber forces concentrate out of the bladder tank to the proportioning device that controls the amount of concentrate that is released into the fire water supply to maintain a consistent dilution. The resultant foam-water mix is then piped to the discharge devices in the hazard area.

It may be installed up to 10.7 m (35.1 ft) equivalent length from the bladder tank but a minimum of five pipe diameters of straight pipe is necessary upstream and three pipe diameters downstream of the proportioner. The normal swing check, concentrate isolation, and hydraulic valves do not have to be included in this equivalent length calculation.

Typical applications include fire monitor and deluge bladder tank systems.



TP-200  
010287

### Approvals and listings

The SKUM TP MK2 Proportioner is designed in accordance with EN 13565-1 and NFPA 11. The proportioner is approved, qualified under, or meets the requirements of the following specifications:

- FM Approvals – FM 5130
  - The SKUM TP MK2 Proportioner is FM Approved for use with SKUM AFFF 3% UG and SKUM ARC 3x3 UG
- Det Norske Veritas (DNV)
- China National Test Centre Approval (TFRI)
  - TP-100 models only
- Russian Maritime Register of Shipping (RMRS)



**Note:** SKUM TP MK2 proportioners are only FM Approved when used in conjunction with the specific foam concentrates and equipment shown in the Approval Guide available at [www.ApprovalGuide.com](http://www.ApprovalGuide.com).

## Ordering information

When ordering, specify the part number, size, and foam proportioning percentage.

**Table 1: Ordering information**

Part No.	Description	Foam agent	Approvals
124005112	TP-50, BSP	SKUM AFFF 3% UG	FM
124005119	TP-50, BSP	SKUM ARC 3X3 UG	FM
124005105	TP-50, BSP	1%-6%	-
124005105N	TP-50, BSP	NFF 3X3 UL201	-
124008114	TP-80, BSP	SKUM AFFF 3% UG	FM
124008121	TP-80, BSP	SKUM ARC 3X3 UG	FM
124008107	TP-80, BSP	1%-6%	-
124008107N	TP-80, BSP	NFF 3X3 UL201	-
124310011	TP-100, BSP (Female) and Groove	SKUM AFFF 3% UG	FM
124310018	TP-100, BSP (Female) and Groove	SKUM ARC 3X3 UG	FM
124310004A	TP-100, BSP (Female) and Groove	3% Fluoroprotein	-
124310004E	TP-100, BSP (Female) and Groove	2%	-
124310004B	TP-100, BSP (Female) and Groove	1%	-
124310004J	TP-100, BSP (Female) and Groove	6%	-
124310004N	TP-100, BSP (Female) and Groove	NFF 3X3 UL201	-
124315014	TP-150, BSP (Female) and Groove	SKUM AFFF 3% UG	FM
124315021	TP-150, BSP (Female) and Groove	SKUM ARC 3X3 UG	FM
124315007A	TP-150, BSP (Female) and Groove	3% Fluoroprotein	-
124315007E	TP-150, BSP (Female) and Groove	2%	-
124315007B	TP-150, BSP (Female) and Groove	1%	-
124315007J	TP-150, BSP (Female) and Groove	6%	-
124315007N	TP-150, BSP (Female) and Groove	NFF 3X3 UL201	-

Part No.	Description	Foam agent	Approvals
124320110	TP-200, DIN/ANSI Flange	SKUM AFFF 3% UG	FM
124320117	TP-200, DIN/ANSI Flange	SKUM ARC 3X3 UG	FM
124320103A	TP-200, DIN/ANSI Flange	3% Fluoroprotein	-
124320103E	TP-200, DIN/ANSI Flange	2%	-
124320103B	TP-200, DIN/ANSI Flange	1%	-
124320103J	TP-200, DIN/ANSI Flange	6%	-
124320103N	TP-200, DIN/ANSI Flange	NFF 3X3 UL201	-
124325104A	TP-250, DIN Flange	3%	-
124325104E	TP-250, DIN Flange	2%	-
124325104B	TP-250, DIN Flange	1%	-
124325104J	TP-250, DIN Flange	6%	-
124325206A	TP-250, ANSI Flange	3%	-
124325206E	TP-250, ANSI Flange	2%	-
124325206B	TP-250, ANSI Flange	1%	-
124325206J	TP-250, ANSI Flange	6%	-

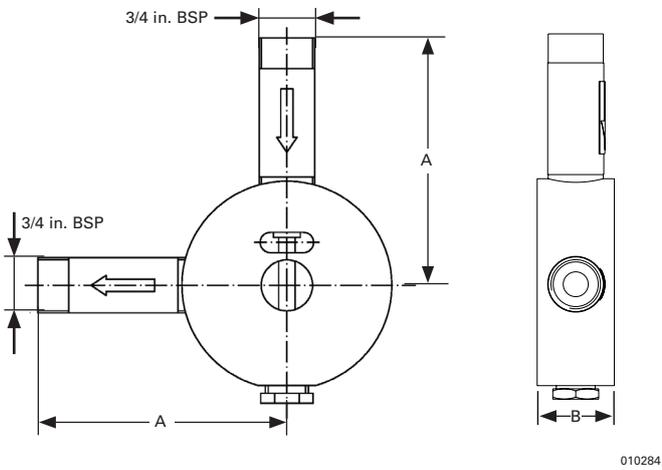
## Proportioner information

**Table 2: Proportioner information**

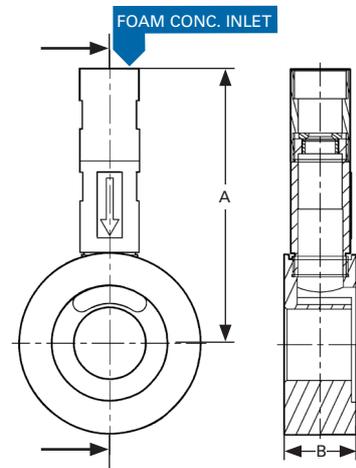
Model	Connection*		A mm (in.)	B mm (in.)	Weight kg (lb)	Maximum working pressure bar (psi)
	Foam	Water				
TP-50	3/4 in. BSP (Male)	DN 50 (2 in.) Flange	125 (4.9)	37 (1.5)	6 (13.2)	16 (232.1)
TP-80	3/4 in. BSP (Male)	DN 80 (3 in.) Flange	140 (5.5)	37 (1.5)	10 (22.0)	16 (232.1)
TP-100	1 1/2 in. BSP (Female) and DN 50 (2 in.) Groove	DN 100 (4 in.) Flange	239 (9.4)	62 (2.4)	12 (26.5)	16 (232.1)
TP-150	1 1/2 in. BSP (Female) and DN 50 (2 in.) Groove	DN 150 (6 in.) Flange	262 (10.3)	62 (2.4)	15 (33.1)	16 (232.1)
TP-200	DN 50 (2 in.) Flange	DN 200 (8 in.) Flange	337 (13.3)	72 (2.8)	32 (70.5)	16 (232.1)
TP-250	DN 80 (3 in.) Flange	DN 250 (10 in.) Flange	365 (14.4)	72 (2.8)	42 (92.6)	16 (232.1)

**Note:** \*Flange connections to fit DIN PN 16 or ANSI Class 150.

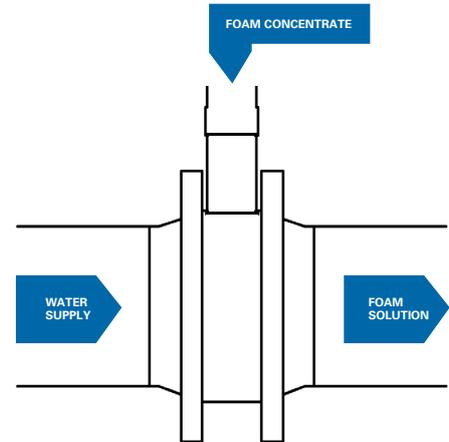
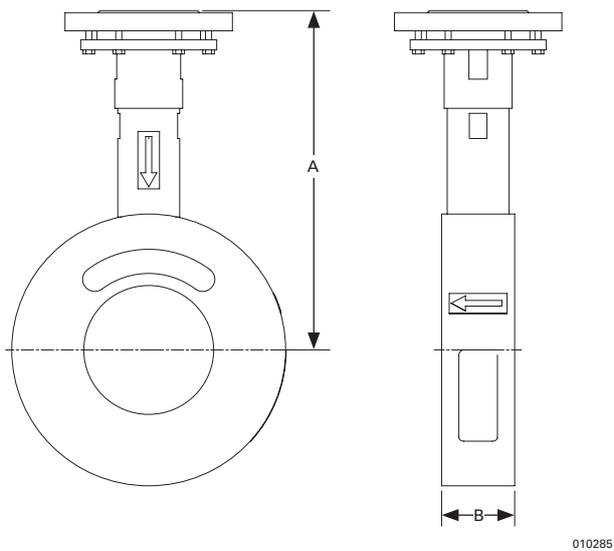
### TP-50 / TP-80



### TP-100 / TP-150



### TP-200 / TP-250



## System specifications

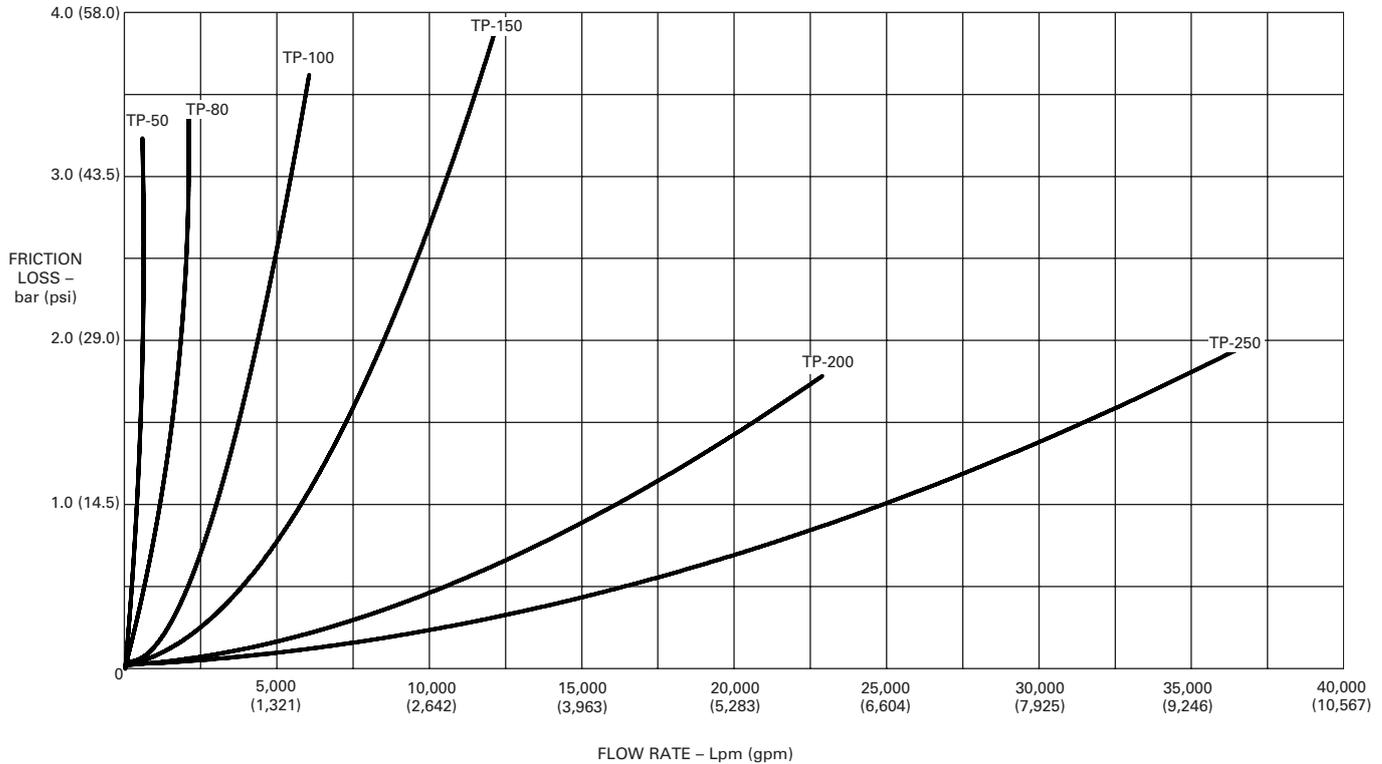
**Table 3: System specifications**

Model	Foam agent	FM Approved flow rates								
		Minimum capacity		Maximum capacity		K-Factor	SKUM AFFF 3% UG		SKUM ARC 3x3 UG	
		Lpm	(gpm)	Lpm	(gpm)		Lpm	(gpm)	Lpm	(gpm)
TP-50	1% to 6%	125	(33)	800	(211)	450	121 to 776	(32 to 205)	212 to 640	(56 to 169)
TP-80	1% to 6%	300	(79)	2,000	(528)	1,110	167 to 2,373	(44 to 627)	549 to 1,813	(145 to 479)
TP-100	1% to 6%	770	(203)	6,000	(1,585)	3,180	254 to 6,246	(67 to 1,650)	1,071 to 5,489	(283 to 1,450)
TP-150	1% to 6%	1,500	(396)	12,000	(3,170)	6,040	390 to 12,397	(103 to 3,274)	2,552 to 9,861	(674 to 2,605)
TP-200	1% to 6%	2,875	(760)	22,750	(6,010)	17,340	1,249 to 19,465	(330 to 5,142)	6,360 to 19,192	(1,680 to 5,070)
TP-250	1% to 6%	5,100	(1,347)	34,100	(9,008)	25,775	–	–	–	–

**Table 4: UL201 system specifications**

Model	Foam agent	Minimum capacity		Minimum capacity		K-Factor
		Lpm	(gpm)	Lpm	(gpm)	
TP-50	NFF 3x3 UL201	341	(90)	859	(227)	450
TP-80	NFF 3x3 UL201	780	(206)	2,139	(565)	1,110
TP-100	NFF 3x3 UL201	1,385	(366)	4,599	(1,215)	3,180
TP-150	NFF 3x3 UL201	3,418	(903)	8,618	(2,277)	6,040
TP-200	NFF 3x3 UL201	6,434	(1,700)	16,161	(4,270)	17,340

## SKUM TP MK2 friction loss



010286

**Note:** The converted values in this document are provided for dimensional reference only and do not reflect an actual measurement.

SKUM and the product names listed in this material are marks and/or registered marks. Unauthorized use is strictly prohibited.