

BLIZZARD WIZARD®



FOAM MAKING PRODUCTS

- Proven, cost effective Class A foam making systems for urban and wildland firefighting operations.
- Superior range Class A foam nozzles of 11, 23, 34, 50 and 60 US gpm/41, 86, 128, 188, 226 LPM.
- Variable round-the-pump foam proportioned for flows of 150 gpm / 564 LPM or less.
- Fixed flow inline inductor with companion air aspirating nozzle.
- The Blizzard Wizard[®] line of products will convert any 1 ½"/38mm hose into an "initial attack line" capable of throwing 600 gpm / 2256 LPM of foam up to 75'/23M.

Legend

- Parts list .. page 2
- Foam Mixer kit and instructions .. page 3
- Calculating settings for mixer .. page 4





BLIZZARD WIZARD® FOAM MAKING PRODUCTS

Nozzle	Flow Capacity	Quantity of foam	Reach @ 100 psi / 6.9 Bar
A	Suitable for hand pump	20-40 gpm / 76-152 lpm	
В	11 gpm / 42 lpm	110 gpm / 416 lpm	45 feet / 14 Meters
C	23 gpm / 87 lpm	230 gpm / 869 lpm	50 feet / 15 Meters
D	34 gpm / 129 lpm	340 gpm / 1285 lpm	70 feet / 21 Meters
E	50 gpm / 189 lpm	500 gpm / 1890 lpm	75 feet / 23 Meters
F	60 gpm / 227 lpm	600 gpm / 2268 lpm	75 feet / 23 Meters

	Part# Description	
A	73BW-1000	Foam Nozzle: Mini-Mousse ¾"/19mm (for Back Pack Fire Ext.)
A	73BW-1000 73BW-1000-DBS	Foam Nozzle: Mini-Mousse 1/4 / 1 / 1 / 1 / 1 / 1 / 1 / 1 / 1 / 1
	73BW-1000-DB3	Foam Nozzle: Mini-Mousse ¾ / Jahnn (101 Do Shinin Funips) Foam Nozzle: Mini-Mousse ¾ / / 19mm (Garden Hose Thread)
A B		
С	73BW-1002	LF-8 Foam nozzle c/w ¾"/19mm GHT
	73BW-1003	MF-16 Foam nozzle c/w 1 ½"/38mm NPSH
(73BW-1003-NH	MF-16 Foam nozzle c/w 1 ½"/38mm NH (NST)
(73BW-1003-QC	MF-16 Foam nozzle c/w 1 ½"/38mm QC
D	73BW-1004	HF-32 Foam nozzle c/w 1 ½"/38mm NPSH
D	73BW-1004-NH	HF-32 Foam nozzle c/w 1 ½"/38mm NH (NST)
E	73BW-1005	SF-50 Foam nozzle c/w 1 ½"/38mm NPSH
E	73BW-1005-NH	SF-50 Foam nozzle c/w 1 ½"/38mm NH (NST)
F	73BW-1006	SF-60 Foam nozzle c/w 1 ½"/38mm NPSH
F	73BW-1007	SF-60 Foam nozzle c/w 1 ½"/38mm NH (NST)
ı	73BW-1009	Suction Tee adapter, 1 $\frac{1}{2}$ "/38mm NPSH (for use with model BB mixer)
I	73BW-1010	Suction Tee adapter, 2"/51mm NPSH (for use with model BB mixer)
No photo	73BW-1010-G	Suction Tee adapter, 2"/51mm NPSH less GHT fitting (for use with model BB mixer)
Н	73BW-1011	Dischg T adpt, 1 ½"/38mm GHT for BB mixer (with samp. nozz.)
K	73BW-1011-H	Dischg T adpt, 1 ½"/38mm GHT for BB mixer (no samp. nozz.)
Н	73BW-1012	Dischg T adpt., 1 $\frac{1}{2}$ "/38mm NPSH for BB mixer (with samp. nozz.)
J	73BW-1012-B	Dischg T adpt., 1 $12^{\prime\prime}/38$ mm NPSH for BB mixer (male GHT only)
K	73BW-1012-H	Dischg T adpt., $1 \frac{1}{2}$ "/38mm NPSH for BB mixer c/w cap & chain (no samp. nozz.)
J	73BW-1013-B	Dischg T adpt., 1 $\frac{1}{2}$ "/38mm female NPSH x 1 $\frac{1}{2}$ "/38mm male NH for BB mixer (male GHT only)
L	73BW-1015	BB Foam Mixer Var. Round-the-Pump Proportioner
No photo	73BW-1017	Loss of pump prime preventor - Valve only
No photo	73BW-1018F	Loss of pump preventor - Cap only - FIRETOL
No photo	73BW-1018S	Loss of pump prime preventor - Cap only - SILV-EX
No photo	73BW-1022	Thread Adpter for booster nozzle 1 ½"/38mm NH male 1"/25mm NH female
G	73BW-1030	Inline foam eductor (NPSH - for use with 73BW-1006)
G	73BW-1031	Inline foam eductor (GHT - for use with 73BW-1007)
No photo	6406TM12GFHEX	3/8"/10mm Brass adapter NPT male x ¾/19mm GHT female Hex



Blizzard Wizard® Foam Mixer Kit

for Portable/Fixed Fire Pumps

Operating Instructions

The Model BB Foam Mixer Kit consists of the following items:

- p/n 1015 Variable Round-the-Pump Foam Mixer c/w Pick Up Tube;
- -p/n 1010 2" Suction Tee Adaptor (5); -p/n 1011 (NHT) **or** 1012 (NPSH) 1½ Discharge Tee Adaptor (7).

Mount the Mixer to the Pump in the following manner:

- Attach the 2" Adaptor (5) to the suction port of the pump with the Female GHF (6) pointing
- Attach the 1½ adaptor (7) to the discharge port of the pump, do not tighten at this time;
 Connect the Male GHF (2) located under the Mixer to the Female GHF on the 2" adaptor
- Connect the $^{3}\!\!/_{\!4}~$ Female GHF Hose of the Model BB Mixer (1) to the $^{3}\!\!/_{\!4}~$ Male GHF of the Discharge Tee Adaptor, (8) (Remove the knurled Aluminum Cap);
- Connect the Pick Up Hose to the 3/4 Male GHF (3) on the top side of the Model BB.

NOTE: There is a tendency for Pump vibration to cause these connections to loosen, thereby causing loss of prime. We recommend that they be tightened finger tight, and then further tightened to of a turn with slip joint plyers.

To make water/foam Solution, proceed as follows:

- Step 1 Ensure that the Metering Valve on the Model BB (4) is CLOSED.
- Step 2 Ensure that the ball valve of the Foam Sampling Nozzle (9) is CLOSED.
- Step 3 With the Pump running at pressure and the Hose line Nozzles OPEN, open the Metering Valve (4) wide (about 1 full turn) until the Pick Up Tube fills with foam fiquid, then close the Metering Valve (4). Aim the Foam Sample Nozzle (10) away from Personnel and the Pumps Water Supply and open the Sample Nozzle ball valve (9). As soon as clear water flows from the Foam Sample Nozzle (9), slowly open the Metering Valve (4) until Foam of the desired consistency is produced, then close the Foam Sample Nozzle ball valve (9). If the 11/2 Tee is not equipped with a Sampling Nozzle, observe the discharge from the Hoseline Nozzle.
- Step 4 Take note of the Metering Valve (4) setting and check periodically while pumping to ensure the setting has not changed.

NOTE: With experience, the concentration setting can be determined qualitatively via the Foam Sample

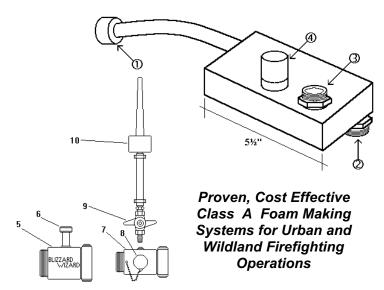
Nozzle (10) as described above. The required setting can also be determined by usin g the Model BB Flow Tables. Use of the Tables requires that the operator is able to determine the total flow in the hoseline. Total Flow can be determined by adding the flows of all nozzles connected. (For details, see the Model BB Flow Tables).

After use, flush the Model BB and the Pick Up Tube THOROUGHLY with clean water. While flushing, open the Metering Valve (4) fully. After flu shing, return the Metering Valve (4) to the fully closed position for storage. The Foam Mixing Kit can be left on the Pump or removed for storage.

Trouble Shooting

If, after performing Steps 1, 2, & 3, foam liquid is not being picked up, check the following:

- Open the Metering Valve (4) fully to flush out any dirt which may be lodged in the Valve
- Ensure that water is flowing through the Model BB. This can be determined by removing the unit, closing the Metering Valve (4), and blowing through the ¾ Male GHF on the underside (2). Only slight resistance to flow should be felt.
- Ensure that the internal pick up Check Valve is free by opening the Metering Valve (4), and blowing through the pick up Male CHF (3). If the Check Valve is stuck closed, connect a garden hose to the pick up Male GHF (3) and run water under pressure (200 PSI Max.) through the Metering Valve. NOTE: this connection will require a double Female GHF or a hose with a Female GHF on either end such as an automatic clothes washer hose.





Calculating Pick-Up Settings for the Model BB Mixer

Nozzle Model Number	Nozzle Capacity (gpm US)	Nozzle Capacity (l/min)
LF-8	11	43
MF-16	23	87
HF-32	34	129
SF-50	50	189
SF-60	60	225

Table 1 - Nozzle Flow Rates
(a) 100 psi (690 KPa)

Concen-	Flow Factor	
tration (% by Vol)	US	Metric
0.2	0.256	2
0.3	0.384	3
0.5	0.64	5
1.0	1.28	10
3.0	3.84	30

Table 2 - Flow Factors

Pick-Up	Pick-Up	Rate
Setting	Ozs/min	ml/min
A	1.3	39
В	8.4	248
С	23.5	695
D	44.7	1322
Е	61	1804
Full Scale	72.1	2132

Table 3 - Pick-Up Rates

To determine the setting required:

Calculate **Total Water Flow** through pump (Sum of Capacities of all Nozzles connected from *Table 1*.

Multiply **Total Water Flow** by the appropriate Concentrate **Flow Factor** from *Table 2* to calculate required **Concentrate Flow.**

Select appropriate setting for **Model BB Control Knob** from *Table 3*.

Example:

2 x **MF-16** Nozzles @ 23 gpm US.

Total Water Flow = $2 \times 23 \text{ gpm} = 46 \text{ gpm}$

Assume: Required Concentration is 0.5%

Flow Factor is 0.64 (Table 2), and,

Concentrate Flow = 46 gpm x 0.64= 29.44 oz/min.

Set Model BB Control Knob between C and D.

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