

GLADIATOR® TRI-FLOW

500, 750, AND 1000 GPM

FOAM/WATER NOZZLE

NDD175

- Self-educing
- Adjustable Air Aspiration
- Adjustable Stream From Full to Fog
- Three Flows In One Nozzle
- Adjustable Foam Proportioning



Description

The Gladiator Tri-Flow Nozzle is a self-educing, adjustable aspiration nozzle with three separate flow settings, a variable proportioning valve, and a foam pickup tube with quick-connect attachment. The nozzle is designed for pickup capability; however, it can be operated without the pickup tube when discharging premixed foam solution or water only. The Gladiator Tri-Flow provides excellent nozzle range, ease of operation, and superior foam qualities that make it suitable for use with protein, fluoroprotein, AFFF, and AR-AFFF foam concentrates.

The Gladiator Tri-Flow Nozzle gives the operator the ability to select either a 500, 750, or 1000 gpm flow setting at 100 psi by simply depressing and turning the baffle head tip at the discharge end of the nozzle. Switching over from non-aspirating to full aspirating mode can be done by simply adjusting the control knob while the nozzle is flowing. Adjusting the stream pattern sleeve on the nozzle body controls nozzle discharge pattern. The desired rate of foam education can be set by adjusting the variable proportioning valve.

The Gladiator Tri-Flow Nozzle represents the latest advancement in foam firefighting nozzle technology and delivers the most effective fire attack flexibility and performance. The Gladiator Tri-Flow is the first self-educing nozzle designed for foam or water with the ability to deliver good foam quality with any foam concentrate.

Features

- Variable flow settings - 500, 750, and 1000 gpm
- Self-educing
- SelectAir™ Adjustable Aspiration for optimum foam quality
- Adjustable foam proportioning - 1/2% and 3%, or 1% and 3%
- Ring Jet™ Injection for complete foam mixing
- Maximum nozzle performance with minimum foam stream fallout
- Compatible with all major types of foam concentrates
- Fully adjustable stream pattern
- Excellent water fog pattern suitable for vapor cloud mitigation
- Nozzle can be used without the pickup tube

Foam Proportioning

The Gladiator Tri-Flow is a self-educing nozzle equipped with a 12-foot (3.66 mm) long foam pickup tube fitted with a quick connect attachment. The Ring Jet Injection design incorporates eight equally spaced foam injection points surrounding the discharging water stream. This results in even distribution of the foam concentrate into the water stream to provide complete and homogenous foam mixing to maximize foam quality (expansion and 25% drain time), which is important for firefighting performance. Since foam liquid discharges into the water stream in a parallel fashion, there is minimal

disruption of the resulting foam stream during injection. The result is a high quality foam stream with minimal fallout and optimum range.

Foam Expansion

The Gladiator Tri-Flow Nozzle's exclusive SelectAir adjustable aspiration feature gives the operator the ability to adjust foam expansion to maximize nozzle performance. The unique Air Tunnel delivers air into the center of the foam stream for even distribution and good air entrainment. This enables more uniform foam expansion across the entire stream profile for optimum foam performance. The Air Tunnel delivers foam expansions of 6 to 1 or higher depending on the foam type and operating conditions. Firefighters now have the ability to balance nozzle range and foam expansion to suit the type of foam being used and the specific needs of the incident.

Technical Data

Inlet Pressure:

- Minimum: 75 PSI (5.2 Bar)
- Nominal: 100 PSI (6.9 bar)
- Maximum: 125 PSI (8.6 bar)

Available Nozzle Flow Rates @ 100 PSI (6.9 Bar):

- 500 GPM (1893 lpm)
- 750 GPM (2839 lpm)
- 1000 GPM (3785 lpm)

VPV Foam Pickup Rates:

- 1/2% and 3% or
- 1% and 3%

Inlet Connections:

- Water: 2 1/2" and 3 1/2" NH Swivel
- Foam: 1 1/4" (32 mm) FNPT w/ quick-connector

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Technical Data (cont.)

Foam Pickup Tube:

1½" x 12' (38 mm x 3.66 M) long

Materials of Construction:

Body: Hardcoated Aluminum

Hardware/Pattern Ring: Stainless Steel

Pattern Sleeve: Hardcoated Aluminum

Pickup Tube: Reinforced Clear PVC w/PVC

Dip Tube

Weight:

23 lb (10.4 kg) with pickup tube

18 lb (8.0 kg) without pickup tube

Performance Data

The Gladiator Tri-Flow Nozzle stream is fully adjustable from straight stream, for maximum throw, to fog pattern by rotation of the pattern adjustment sleeve.

GLADIATOR TRI-FLOW HEIGHT AND REACH CHARTS

Gladiator Tri-Flow Setting 500 GPM Reach													
Nozzle Pressure		Flow Rate		Reach 30°		Reach 45°		Reach 60°		Reach 75°		Reach 85°	
psi	bar	gpm	lpm	feet	meters	feet	meters	feet	meters	feet	meters	feet	meters
75	5.2	433	1639	138	42.1	124.2	38	109.0	33.3	69	21.0	26.9	8.2
100	6.9	500	1893	150	45.8	135	41	118.5	36.1	75	22.9	29.3	8.9
125	8.6	559	2116	180	54.9	162	49	142.2	43.4	90	27.5	35.1	10.7

Gladiator Tri-Flow Setting 500 GPM Height													
Nozzle Pressure		Flow Rate		Height 30°		Height 45°		Height 60°		Height 75°		Height 85°	
psi	bar	gpm	lpm	feet	meters	feet	meters	feet	meters	feet	meters	feet	meters
75	5.2	433	1639	29	8.8	49.3	15.0	74.0	22.6	95.7	29.2	101.5	31.0
100	6.9	500	1893	31	9.5	52.7	16.1	79.1	24.1	102.3	31.2	108.5	33.1
125	8.6	559	2116	36	11.0	61.2	18.7	91.8	28.0	118.8	36.2	126.0	38.4

Gladiator Tri-Flow Setting 750 GPM Reach													
Nozzle Pressure		Flow Rate		Reach 30°		Reach 45°		Reach 60°		Reach 75°		Reach 85°	
psi	bar	gpm	lpm	feet	meters	feet	meters	feet	meters	feet	meters	feet	meters
75	5.2	650	2460	164	50.0	147.6	45	129.6	39.5	82	25.0	32.0	9.8
100	6.9	750	2839	180	54.9	162	49	142.2	43.4	90	27.5	35.1	10.7
125	8.6	839	3176	207	63.1	186.3	57	163.5	49.9	103.5	31.6	40.4	12.3

Gladiator Tri-Flow Setting 750 GPM Height													
Nozzle Pressure		Flow Rate		Height 30°		Height 45°		Height 60°		Height 75°		Height 85°	
psi	bar	gpm	lpm	feet	meters	feet	meters	feet	meters	feet	meters	feet	meters
75	5.2	650	2460	33	10.1	56.1	17.1	84.2	25.7	108.9	33.2	115.5	35.2
100	6.9	750	2839	38	11.6	64.6	19.7	96.9	29.6	125.4	38.2	133.0	40.6
125	8.6	839	3176	43	13.1	73.1	22.3	109.7	33.4	141.9	43.3	150.5	45.9

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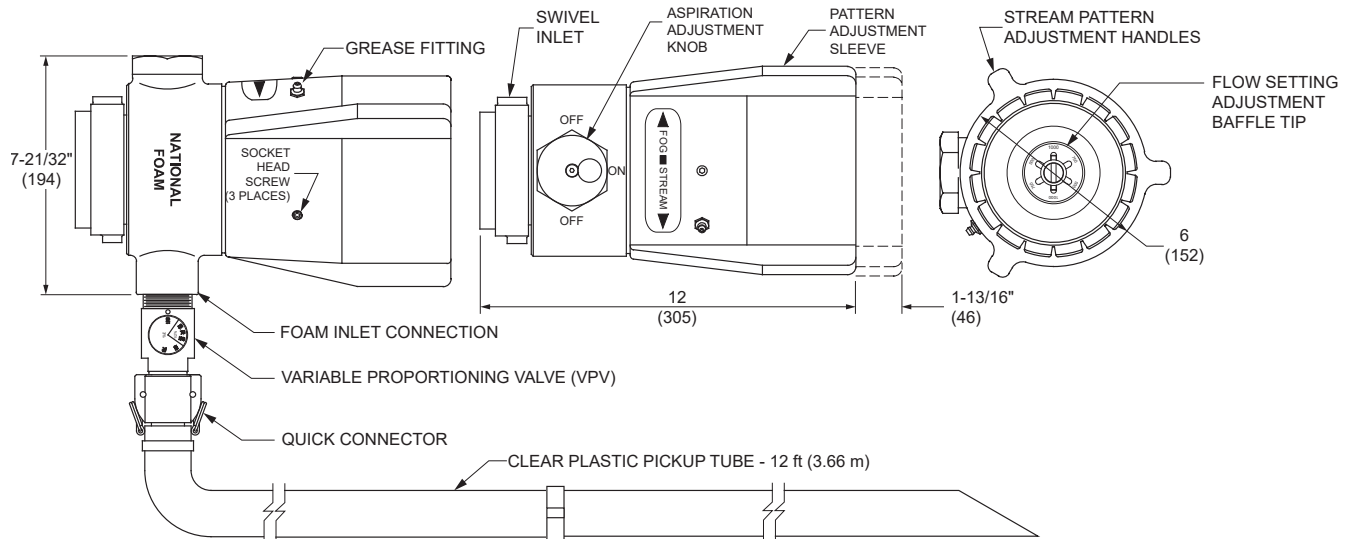
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Gladiator Tri-Flow Setting 1000 GPM Reach													
Nozzle Pressure		Flow Rate		Reach 30°		Reach 45°		Reach 60°		Reach 75°		Reach 85°	
psi	bar	gpm	lpm	feet	meters	feet	meters	feet	meters	feet	meters	feet	meters
75	5.2	866	3278	180	54.9	162	49	142.2	43.4	90	27.5	35.1	10.7
100	6.9	1000	3785	200	61.0	180	55	158.0	48.2	100	30.5	39.0	11.9
125	8.6	1118	4232	225	68.6	202.5	62	177.8	54.2	112.5	34.3	43.9	13.4

Gladiator Tri-Flow Setting 1000 GPM Height													
Nozzle Pressure		Flow Rate		Height 30°		Height 45°		Height 60°		Height 75°		Height 85°	
psi	bar	gpm	lpm	feet	meters	feet	meters	feet	meters	feet	meters	feet	meters
75	5.2	866	3278	37	11.3	62.9	19.2	94.4	28.8	122.1	37.2	129.5	39.5
100	6.9	1000	3785	41	12.5	69.7	21.3	104.6	31.9	135.3	41.3	143.5	43.8
125	8.6	1118	4232	45	13.7	76.5	23.3	114.8	35.0	148.5	45.3	157.5	48.0

NOTE: Please note that these are calculated values, not tested data, therefore there may be a margin of error. Also keep in mind that weather conditions will affect these values.



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ORDERING INFORMATION

Part Number	Description
1251-2532-0	Gladiator Tri-Flow, 2½" NH Swivel, ½ and 3% Metering Valve
1251-2532-7	Gladiator Tri-Flow, 2½" NH Swivel, 1 and 3% Metering Valve
1251-2532-1	Gladiator Tri-Flow, 3½" NH Swivel, ½ and 3% Metering Valve
1251-2535-3	Gladiator Tri-Flow, 2½" NH Swivel, Without Pickup Tube
1251-2535-4	Gladiator Tri-Flow, 3½" NH Swivel, Without Pickup Tube

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