

# GLADIATOR®

## HIGH CAPACITY 1500, 2000, 3000, or 4000 GPM FOAM/WATER NOZZLE

NDD180

- Self-Educting With Jet Pump
- Adjustable Air Aspiration
- Adjustable Stream From Full To Fog



### Description

The Gladiator nozzle represents the latest advancement in foam firefighting nozzle technology and delivers the most effective fire attack flexibility and performance, utilizing a totally new design. The Gladiator is the first self-educting nozzle designed for foam or water with the ability to deliver optimum performance with any foam concentrate.

Prior to the introduction of the Gladiator, firefighters had to compromise between the poor foam quality of a water nozzle or the inferior stream range delivered by an aspirating foam nozzle. Now you can have maximum nozzle range combined with excellent foam quality all in a single package. The revolutionary design and unique foam producing characteristics make the Gladiator suitable for use with most types of foam concentrates including protein, fluoroprotein, AFFF, and AR-AFFF. The Gladiator's unique Ring Jet™ foam injection system and Air Tunnel™ design, combined with its discharge straightening vanes, provide consistent foam mixing resulting in excellent foam quality and stream performance. The Gladiator nozzle stream is fully adjustable from straight stream (for maximum throw) to fog pattern by rotation of the pattern adjustment ring. The Gladiator is designed as a self-educting nozzle for direct pick-up or remote foam concentrate pick-up using jet pump(s). See Data Sheet NME020 for Jet Pump details.

### Features

- Excellent stream range and quality
- SelectAir™ adjustable aspiration for optimum foam
- Self-educting proportioning when used with remote jet pump (not included)
- Ring Jet™ injection for complete foam mixing
- Maximum nozzle performance with minimum stream fallout
- Compatible with all major types of foam concentrate
- Stream pattern fully adjustable
- Excellent water fog pattern suitable for vapor cloud mitigation

### Foam Proportioning

The Gladiator is a self-educting nozzle that can be used with a remotely located water-driven jet pump proportioner. This offers the advantage of proportioning the foam concentrate supply a safe distance away from the fire.

The new 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 fall-out and optimum range.

### Foam Expansion

The Gladiator'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 air entrainment. This enables more uniform foam expansion across the entire stream profile for optimum foam performance. The Air Tunnel has been independently verified to produce 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.

Large fully involved tank fires create significant thermal updraft which can carry away aspirated foam streams before they reach the fuel surface. Used in the non aspirating mode, the Gladiator can penetrate the thermal updraft and allow the foam to build on the fuel. Once a foam blanket has been established, the thermal updraft is broken and the nozzle can be easily switched to aspirating mode producing a longer lasting foam blanket. Switch over from non aspirating to full aspirating can be done by simply adjusting the control handle while the nozzle is flowing. In aspirating mode, the nozzle produces

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#### Foam Expansion (cont.)

a thick more homogenous foam blanket necessary to resist heat and the elevated vapor pressure of superheated fuels which can punch holes through an inferior foam blanket. The aspirating advantage becomes even more evident for vapor mitigation after the fire has been extinguished, during the long recovery period necessary to completely neutralize 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):

- 1500 GPM (5678 lpm)
- 2000 GPM (7570 lpm)
- 3000 GPM (11355 lpm)
- 4000 GPM (15141 lpm)

#### Inlet Connections:

- Water: 6" 150# FF ANSI Flange
- Foam: Dual 2"(51mm) FNPT

#### Materials of Construction:

- Body: Hardcoated Aluminum
- Hardware/Pattern Ring: Stainless Steel
- Pattern Sleeve: Spiral Wound Fiberglass

#### Weight: 65 Lb. (29.5 kg)

#### Performance Data

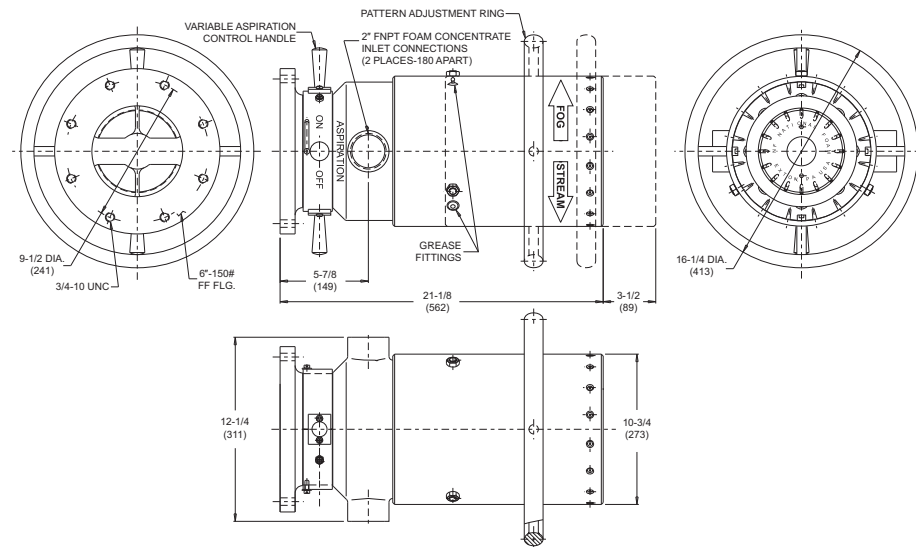
Foam stream range figures are based on 25° to 30° nozzle elevation angle with still air conditions, mounted on a monitor 48" high.

GLADIATOR MODEL 1500					
Nozzle Pressure		Flow Rate		Straight Stream Range	
psi	bar	gpm	lpm	feet	meters
75	5.2	1299	4917	176	53.7
100	6.9	1500	5678	207	63.1
125	8.6	1677	6347	227	69.2

GLADIATOR MODEL 2000					
Nozzle Pressure		Flow Rate		Straight Stream Range	
psi	bar	gpm	lpm	feet	meters
75	5.2	1732	6556	191	58.2
100	6.9	2000	7570	230	70.1
125	8.6	2236	8464	249	75.8

GLADIATOR MODEL 3000					
Nozzle Pressure		Flow Rate		Straight Stream Range	
psi	bar	gpm	lpm	feet	meters
75	5.2	2598	9834	249	75.8
100	6.9	3000	11355	300	92
125	8.6	3354	12695	330	101

GLADIATOR MODEL 4000					
Nozzle Pressure		Flow Rate		Straight Stream Range	
psi	bar	gpm	lpm	feet	meters
75	5.2	3465	13115	300	92
100	6.9	4000	15141	350	107
125	8.6	4472	16930	375	114



ORDERING INFORMATION	
PART NUMBER	DESCRIPTION
1251-2510-8	1500 gpm @ 100 psi (5678 lpm @ 6.9 bar)
1251-2515-5	2000 gpm @ 100 psi (7570 lpm @ 6.9 bar)
1251-2516-1	3000 gpm @ 100 psi (11355 lpm @ 6.9 bar)
1251-2525-0	4000 gpm @ 100 psi (15141 lpm @ 6.9 bar)