



DATA SHEET  
#NDD130

# PC-31 AIR ASPIRATING FOAM NOZZLE

## **Description**

The **PC-31 Air Aspirating Foam Nozzle** is a lightweight, rugged performer designed to maximize flexibility and fire fighting capability. It is designed to be mounted on fixed or portable monitors but can also be used as a portable hand held nozzle. The air aspirating design produces superior foam with all foam types, resulting in increased expansion and longer drainage times than with non-air aspirating type nozzles. This results in premium foam blanket performance and stability for safer operation. Nozzle is normally provided with a straight stream discharge pattern. An optional spray attachment can be added to provide a pattern which is adjustable from full spray to straight stream, allowing the operator precise control of the foam application. The nozzle will flow 310 GPM (1174 LPM) @ 150 PSI (10.3 Bar) inlet pressure. The nozzle can be provided in lightweight aluminum or corrosion resistant brass with fused polyester powder coated finish, which provides UV protection and superior corrosion resistance even on aluminum nozzles.

The nozzle can be provided with an optional self-educing feature allowing foam concentrate to be drawn directly from pails, drums, or tanks. Since the PC-31 is designed as a foam nozzle, stream range is not impaired when using the self-educing feature.

## **Features**

- High Capacity, air aspirating, monitor mounted foam nozzle.
- Excellent foam production with Protein, Fluoroprotein, AFFF & AR-AFFF type foams.
- Can be provided in lightweight aluminum construction or brass for superior corrosion resistance and wear.
- Superior nozzle reach allows safe placement remote from the hazard.
- Suitable for operating pressures from 50 PSI to 200 PSI (3.5 Bar to 13.8 Bar).
- Available with fully adjustable straight stream/spray pattern, as an option.
- Can be provided with self-education option.

## **Applications**

The **PC-31 Air Aspirating Foam Nozzle** is commonly

mounted on manual, oscillating or remote controlled monitors, used for protection of product storage tanks, dike protection, process areas and loading racks. They are suitable for use on foam pumpers, foam trailers and aerial apparatus, and also various marine applications such as tankers & barges, chemical carriers, fire boats, docks and offshore platforms. They are also used in hand line application of foam or water (typically a two fire fighter operation).

## **Technical Specifications**

The PC Type Nozzle shall be an air aspirated design for use with all types of foam concentrates. Nozzle shall be suitable for handline operation as well as monitor mounting. To facilitate the use of the nozzle for hand line operation, the nozzle shall have a full ring type handle mounted in the front and a rotating dual handle in the back. The orifice shall be a shaped jet to improve the efficiency of the nozzle and shall flow 310 GPM (1174 LPM) @ 150 PSI (10.3 Bar) inlet pressure. Orifice shall be removable and held in place with a snap ring.

The nozzle shall be available with either a cast aluminum foam maker and aluminum discharge tube or a cast brass foam maker and brass discharge tube where superior corrosion resistance and wear are required. Nozzle shall be provided with a fused polyester powder coat finish for UV protection and superior corrosion resistance. Nozzle shall have a 2-1/2" NH or NPSH female swivel inlet.

The nozzle shall be provided as standard in a straight stream discharge configuration. As an option, the nozzle shall also be available with a fully adjustable spray pattern control assembly. Spray deflector shall be of the blabber mouth style and shall provide selection of nozzle discharge from full spray to straight stream.

The PC-31 nozzle is designed to use foam solution generated at a separate source. However, it is available with an optional self-educator with 3% or 6% pick-up, or a metering valve with 1%, 3% & 6% settings. Models incorporating the self-educator shall include a 102" long pick-up tube with stainless steel wand and check valve.

**Approvals and Listings**

- UL Listed
- FM Approved
- USCG Approved
- New York City Board of Standards and Appeals

**Technical Data**

*Materials of Construction:*

- Brass Model
  - Foam Maker ..... Cast Brass, ASTM B-62
  - Discharge tube ..... Brass Tubing
  - Deflector ..... Cast Brass
  - Deflector Rod ..... Stainless Steel Tubing
  - Swivel Gasket ..... Buna N
- Aluminum Model
  - Foam Maker ..... Cast Aluminum
  - Discharge Tube ..... Aluminum Tubing

- Deflector ..... Cast Aluminum
- Deflector Rod ..... Stainless Steel Tubing
- Swivel Gasket ..... Buna N

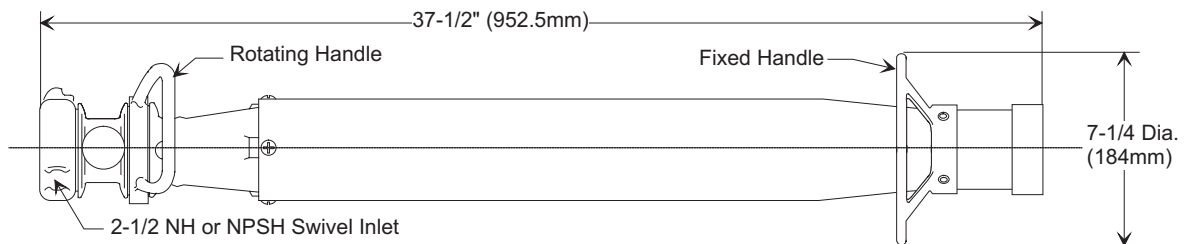
*Finish:* ..... Abrasive Blast to SSPC-SP6.  
 Chemical wash, rinse, and seal. Oven baked fusion coated poly-ester, 3 mils dry film thick-ness(DFT), gold (brass) or silver (aluminum) color

*Working Pressure:*

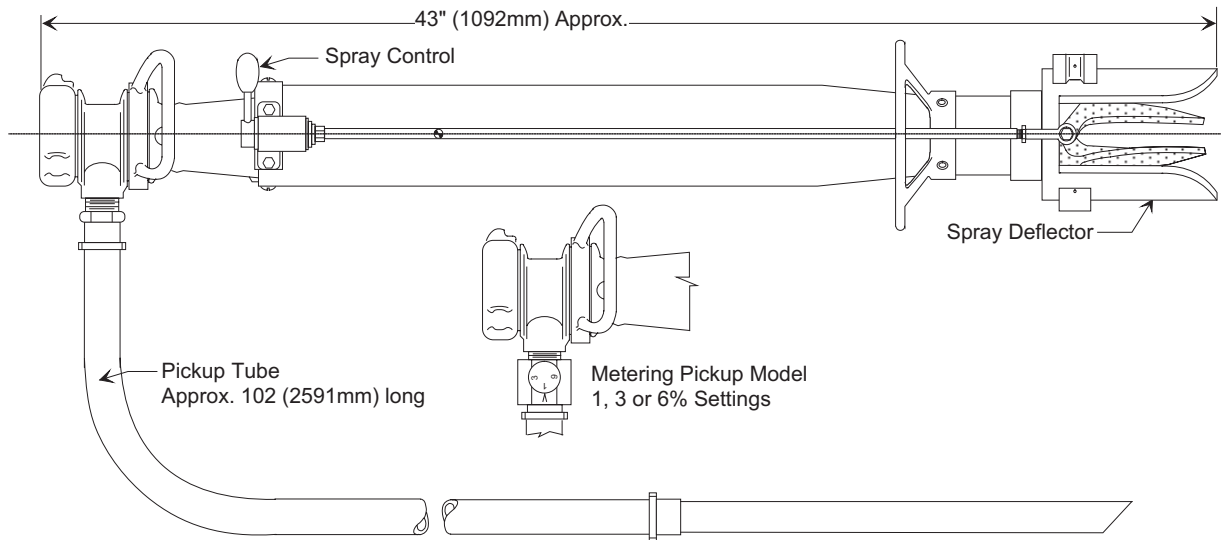
- Brass Model ..... 200 PSI (13.8 Bar)
- Aluminum Model ..... 200 PSI (13.8 Bar)

**Options**

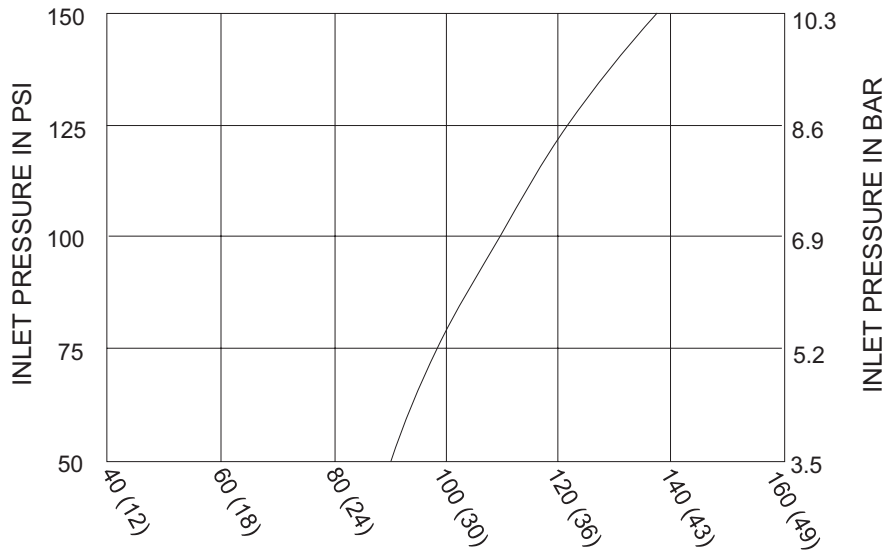
- Self-Educting
- Metering Valve
- Spray Attachment



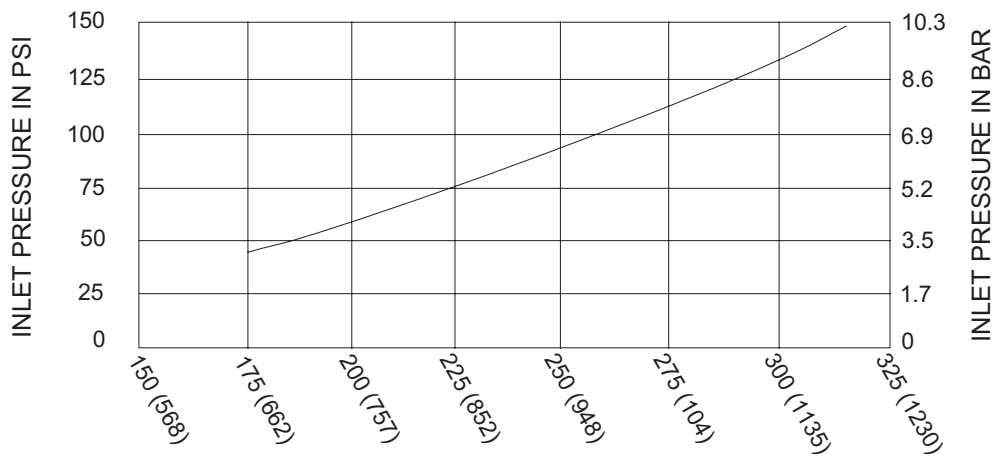
**OUTLINE ASSEMBLY  
 STANDARD STRAIGHT STREAM NOZZLE**



**OUTLINE ASSEMBLY  
 OPTIONS - SELF-EDUCTING, METERING & SPRAY**



STRAIGHT STREAM RANGE IN FEET (METERS)  
PC-31 Nozzle - Straight Stream Range Characteristics



WATER or FOAM SOLUTION DISCHARGE IN GPM (LPM)  
PC-31 Portable Nozzle - Water or Foam Solution Discharge Characteristics

RANGE	
Nozzle Inlet Pressure PSI (Bar)	Max. Throw Range FT (M)
100 (6.9)	115 (35.1)
150 (10.3)	135 (41.1)
200 (13.2)	149 (45.1)

NOZZLE THRUST REACTION LBF (N)	
Inlet Pressure PSI (Bar)	LBF (N)
50 (3.5)	57 (254)
75 (5.2)	85 (378)
100 (6.9)	113 (503)
125 (8.6)	141 (627)
150 (10.3)	170 (756)
175 (12.1)	198 (881)
200 (13.8)	226 (1005)

## Ordering Information

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Part Number	Discharge Percentage(%)	Nozzle Pattern*	Inlet Thread Type**	Weight		Shipping	
				lbs.	(kg)	CubeFt <sup>3</sup>	(m <sup>3</sup> )
<b>BRASS</b>							
1251-1318-0	w/o Pick-Up Tube	STRM	FNH	26.5	12.0	1.3	0.04
1251-1318-2	w/o Pick-Up Tube	STRM	FNPSH	26.5	12.0	1.3	0.04
1251-1318-4	w/o Pick-Up Tube	MOS	FNH	37.5	17.0	1.4	0.04
1251-1318-8	3	STRM	FNH	30.8	14.0	1.3	0.04
1251-1319-2	3	MOS	FNH	41.8	18.9	1.5	0.05
1251-1319-6	6	STRM	FNH	30.8	14.0	1.3	0.04
1251-1320-0	6	MOS	FNH	41.8	18.9	1.5	0.05
1251-1320-4	M	STRM	FNH	32.8	14.9	1.3	0.04
1251-1320-8	M	MOS	FNH	43.8	19.8	1.5	0.05

### **ALUMINUM**

1251-1325-0	w/o Pick-Up Tube	STRM	FNH	9.5	4.3	1.3	0.04
1251-1325-2	w/o Pick-Up Tube	MOS	FNH	15.0	6.8	1.4	0.04
1251-1325-4	3	STRM	FNH	13.8	6.2	1.3	0.04
1251-1325-5	3	STRM	FNPSH	13.8	6.2	1.3	0.04
1251-1325-6	3	MOS	FNH	19.3	8.7	1.5	0.05
1251-1325-8	6	STRM	FNH	13.8	6.2	1.3	0.04
1251-1326-0	6	MOS	FNH	19.3	8.7	1.5	0.05
1251-1326-2	M	STRM	FNH	15.8	7.1	1.3	0.04
1251-1326-4	M	MOS	FNH	21.3	9.6	1.5	0.05

NOTE: All self-inducting nozzles come with a pick-up tube.

\* STRM = Straight Stream Spray

MOS = Manual Operated Spray

\*\* FNH = Female National Hose Thread

FNPSH = Female National Pipe Straight Hose Thread

This information is only a general guideline, and each installation may require modifications to meet the applications or requirements of that situation. The company reserves the right to change any portion of this information without notice. Terms and conditions of sale apply and are available on request.

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