

Cincinnati Fire Department Fire Training Supplement DRILL BOOK

SECTION #3
Engine Co.
Operations

Total Pages: 4
Topic #: 15

Date: January 2006

Section #: 3

TOPIC TITLE: Master Stream Nozzles and Tips

TOPIC #15 MASTER STREAM NOZZLES

THE T.F.T. MASTER STREAM NOZZLE:



The Task Force Tip master stream nozzle is presently carried by both engine and ladder companies. This nozzle is carried for ladder pipes, (as well as for Engine Co. master stream appliances. This nozzle has a built in stream straightening device.

This nozzle has 2-1/2"NS threads.

The nozzle provides a finely broken stream like it's smaller counterpart on the 1-3/4" TFT hand lines.

GPM: Capable of flowing in the range of 150 to 1250 GPM.

STREAM: Variable stream

FLUSH: Not practical in the field.



Cincinnati Fire Department Fire Training Supplement DRILL BOOK

TOPIC TITLE:

SECTION #3
Engine Co.
Operations

Total Pages: 4

Topic #: 15

Date: January $\overline{2006}$

Section #: 3 Master Stream Nozzles and Tips

SMOOTH BORE STACKED TIPS:

TIP SIZES: 1-3/8"1-1/2", 1-3/4" and 2"

GPM RANGES:

1-3/8" 500 GPM 1-1/2" 600 GPM 1-3/4" 800 GPM 2" 1000 GPM

(note: due to being hands-free, higher NP are obtainable for more

GPM)

STREAM: Solid stream

FLUSH: Not Applicable

THE LARGEST TIP SHOULD ALWAYS BE USED



Break-apart design with 1-3/8", 1-1/2", 1-3/4" and 2" tips





Cincinnati Fire Department Fire Training Supplement DRILL BOOK

TOPIC TITLE:

SECTION #3
Engine Co.
Operations

Total Pages: 4
Topic #: 15

Date: January 2006

Section #: 3 Master Stream Nozzles and Tips

IMPERIAL "1000"



The Imperial "1000" is also a constant flow nozzle, that will deliver the same G.P.M. in a fog stream as it will in a straight stream. This nozzle can deliver up to 1000 G.P.M.. The minimum nozzle pressure for the Imperial "1000" nozzle is 50# and the maximum nozzle pressure is 100#. When making hydraulic calculations using the Imperial "1000" nozzle, the 2" tip factor should be used. The nozzle has 2-1/2" CS threads and can be used effectively with the ladder pipe with the use of adapters where necessary.

When placed in service with the ladderpipe, the small "U" slot on the base of the nozzle must be in the downward position when elevated. This will allow for a switch from full vapor pattern to a full straight stream by using the ladderpipe control rope.



Section #: 3

Cincinnati Fire Department Fire Training Supplement DRILL BOOK

SECTION #3
Engine Co.
Operations

TOPIC TITLE:

Master Stream Nozzles and Tips

Total Pages: 4
Topic #: 15

LADDER PIPE TIPS

TIP SIZES: 1-1/4", 1-1/2" and 1-3/4"

GPM RANGE: (at maximum 75 psi Nozzle Pressure Allowance

on the Ladder Pipe Set Up)

STREAM: Solid stream

FLUSH: Not Applicable



NOTES ON MASTER STREAM NOZZLES:

- 1. Except where required for a particular purpose (exposure protection, gas dispersion, mass decontamination, etc) the variable stream nozzles (TFT Master Stream and Imperial 1000) should not be the primary nozzle for master stream applications. All companies should have their apparatus mounted master stream devices and ladder pipes set up with smooth bore tips.
- 2. The smooth bore tips should be stored with the largest size available to allow for maximum water delivery when utilized for defensive big fire situations.
 - a. Engine Company Deck Guns 2" Tip
 - b. Ladder Company Ladder Pipe Tips 1-3/4" Tip
- 3. Smaller tips should be kept in a readily accessible location to expedite attachment in the event orders for increased reach are received, and greater GPM cannot be delivered to provide needed reach. Realize that at the same pressures, a smaller tip will provide less GPM, even though reach may increase.