



Nozzle Reaction

Nozzle reaction is the ultimate decider of effective fire flows for handlines. If the nozzle reaction is too great then the nozzle operator will either gate down to control the hoseline or will lose control of it and suffer the corresponding consequences.

By definition, nozzle reaction is the force of the water being discharged that is directed to a person or device holding the nozzle.

Nozzle reaction can be calculated for fog and smooth bore nozzles.

Hand lines:



1¾" Hose:

Task Force Tips (TFT) fog nozzle, 100 gpm = nozzle reaction 51 pounds
1 FF

Task Force Tips (TFT) fog nozzle, 150 gpm = nozzle reaction 76 pounds
2 FFs

Task Force Tips (TFT) fog nozzle, 200 gpm = nozzle reaction 101 pounds
3+ FFs

2½" Hose:

Task Force Tips (TFT) fog nozzle, 250 gpm = nozzle reaction 127 pounds = 4 FFs

Task Force Tips (TFT) fog nozzle, 300 gpm = nozzle reaction 152 pounds = 4+ FFs

Blitz line smooth bore nozzle, 1" tip = 210 gpm, nozzle reaction 79 pounds = 2+ FFs

Blitz line smooth bore nozzle, 1⅝" tip = 266 gpm, nozzle reaction 99 pounds = 3+ FFs

Blitz line smooth bore nozzle, 1¼" tip = 328 gpm, nozzle reaction 123 pounds = 4 FFs

Master Streams:



Smooth bore nozzle, 1⅜" tip = 210 gpm, nozzle reaction 237 pounds

Smooth bore nozzle, 1½" tip = 266 gpm, nozzle reaction 283 pounds

Smooth bore nozzle, 1¾" tip = 813 gpm, nozzle reaction 385 pounds

Smooth bore nozzle, 2" tip = 1062 gpm, nozzle reaction 502 pounds

TFT fog nozzle, 1250 gpm = nozzle reaction 631 pounds

NEVER LOWER THE GROUND MONITOR (when used with the portable mount) BELOW THE PRESET STOPPING POINT (about 30°).

