

# PUMP OPERATOR'S FIELD CHART

This Guide is designed to assist the fire ground pump operator on the fire ground.  
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NOZZLE OPERATING PRESSURES	
	PSI@TIP
SMOOTH BORE NOZZLE	50
SMOOTH BORE MASTER STREAM	80
ADJUSTABLE STREAM NOZZLE	100
LOW PRESSURE ADJUSTABLE STREAM NOZZLE	75
ADJUSTABLE MASTER STREAM NOZZLE	100
LOW PRESSURE ADJUSTABLE MASTER STREAM NOZZLE	80

FRICTION LOSS PER 100 FEET OF HOSE					
GPM	1-3/4"	2"	2-1/2"	4"	5"
130	26				
160	40	20			
185	53	27			
210		35	8		
265		56	14		
325			21		
500				5	2
600				7	3
700				10	4
800				13	5
1000				20	8
1100					10
1200					12
1400					16
1500					18

ENGINE PUMP PRESSURES						
ALL PUMP PRESSURES ROUNDED UP TO THE NEAREST 5 PSI				PUMP AT		
HOSE SIZE	NOZZLE TYPE	TIP SIZE	GPM	150'	200'	250'
1-3/4"	SOLID STREAM	7/8"	160	110	130	150
1-3/4"	SOLID STREAM	15/16"	185	130	155	180
1-3/4"	AUTOMATIC	ADJ	130	140	150	165
1-3/4"	LOW PRESSURE AUTOMATIC	ADJ	130	115	130	140
2"	SOLID STREAM	7/8"	160	80	90	100
2"	SOLID STREAM	15/16"	185	90	105	120
2"	AUTOMATIC	ADJ	150	125	135	145
2"	LOW PRESSURE AUTOMATIC	ADJ	150	100	110	120
2-1/2"	SOLID STREAM	1"	210	65	70	75
2-1/2"	SOLID STREAM	1-1/8"	265	70	80	85
2-1/2"	SOLID STREAM	1-1/4"	325	80	90	100
2-1/2"	AUTOMATIC	ADJ	265	125	130	135
2 1/2"	LOW PRESSURE AUTOMATIC	ADJ	265	100	105	110

MASTER STREAM FLOWS	
TIP SIZE	GPM
1-3/8"	500
1-1/2"	600
1-5/8"	700
1-3/4"	800
2"	1000

ADDITIONAL WATER AVAILABLE FROM A HYDRANT	
% DECREASE IN INTAKE PRESSURE	ADDITIONAL WATER AVAILABLE
0-10	THREE TIMES THE AMOUNT BEING DELIVERED (3X)
11-15	TWICE THE AMOUNT BEING DELIVERED (2X)
16-25	SAME AS AMOUNT BEING DELIVERED (1:1)
25 +	LESS THAN AMOUNT BEING DELIVERED