

WESTBURY FD - PUMPING PRESSURE GUIDE

HOSE DIAMETER	(NP) NOZZLE PRESSURE		(FL) FRICTION LOSS/LENGTH	(E) ELEVATION + Floors above / - below ground level	(LP) TOTAL LINE PRESSURE	FLOW RATE (GPM)
	SMOOTH BORE	TASK FORCE (FOG NOZZLE)				
1 3/4"	50	100	25	+/- 5	NP+FL+E=LP	175
2 1/2"	50	100	7	+/- 5	NP+FL+E=LP	250

1 3/4 Friction Loss = 1/2 the total length of hose used 2 1/2 Friction Loss = .1 of total length + # Lengths x 2

		1 3/4" (FL) FRICTION LOSS / (E) ELEVATION PRESSURES						2 1/2"									
LENGTHS		1	2	3	4	5	6	1	2	3	4	5	6	7	8	9	10
F L O O R S	1	25	50	75	100	125	150	7	14	21	28	35	42	49	56	63	70
	2	30	55	80	105	130	155	12	19	26	33	40	47	54	61	68	75
	3	35	60	85	110	135	160	17	24	31	38	45	52	59	66	73	80
	4	40	65	90	115	140	165	22	29	36	43	50	57	64	71	78	85
	5	45	70	95	120	145	170	27	34	41	48	55	62	69	76	83	90
	6	50	75	100	125	150	175	32	39	46	53	60	67	74	81	88	96

FL / E PRESSURES		REDUCED LINE											
		1 3/4"						2 1/2"					
LENGTHS		1	2	3	4	5	6	7	8	9	10	11	12
F L O O R S	1	25	50	75	100	107	114	121	128	135	142	149	156
	2	30	55	80	105	112	119	126	133	140	147	154	161
	3	35	60	85	110	117	124	131	138	145	152	159	166
	4	40	65	90	115	122	129	136	143	150	157	164	171
	5	45	70	95	120	127	134	141	148	155	162	169	176
	6	50	75	100	125	132	139	146	153	160	167	174	181

NP + FL/E = LP = PRECONNECT = PRESET PSI
LINE PRESSURE

1 3/4" 200' Pre-Connect Smooth Bore Nozzle	150 PSI	1 3/4" 200' Pre-Connect Task Force Fog Nozzle	200 PSI
2 1/2" 200' Pre-Connect Smooth Bore Nozzle	80 PSI	2 1/2" 200' Pre-Connect Task Force Fog Nozzle	130 PSI
1 3/4" 100' Pre-Connect TRASH LINE	100 PSI	BOOSTER LINE	200 PSI
STANDPIPE	100 PSI + 5 per floor	SPRINKLER SYSTEM	150 PSI
SUPPLYING ANOTHER ENGINE	START HYDRANT PRESSURE & INCREASE AS NEEDED	SUPPLYING TOWER LADDER	START 200 PSI 250 MAX
FEEDING A MASTER STREAM	START 80 PSI	FOAM EDUCTOR	200 PSI