

Table of Allowable Total Equivalent Length for Vacuum System Exhaust Piping											
NFPA99 SCFM with one pump in reserve (from cut sheet)	Pipe Size (based on Sch 40, copper or brass)										
	1	1.25	1.5	2	2.5	3	3.5	4	5	6	8
5.3	96	335	615								
7	57	185	425								
8	45	144	335								
11		89	195	650							
13.5		58	133	470							
16		42	96	345							
17			86	295							
20			66	215	565						
21			61	190	500						
25				145	400						
37.3				73	175	500					
38				70	168	485					
40				65	151	435					
49					105	310					
53					90	270					
56					80	235	498				
61					70	203	420				
66					60	165	366				
68					58	158	356				
75					50	130	299				
77						125	290	530			
87						100	225	450			
91						90	205	397			
99						81	175	345			
106						71	145	301			
112						64	130	270			
120						60	115	245			
130						53	100	218			
137							92	201	485		
147							84	182	440		
154							79	160	400		
168							70	145	341		
174							67	140	315		
200							57	117	250		
222							50	95	200	550	
258								80	151	405	
274								71	135	345	
300								61	119	288	
333								52	102	233	
360									90	210	
387									82	185	
411									75	162	

NFPA99 SCFM with one pump in reserve (from cut sheet)	Pipe Size (based on Sch 40, copper or brass)										
	1	1.25	1.5	2	2.5	3	3.5	4	5	6	8
480									60	129	521
504									55	115	481
516										109	442
600										88	362

8-9-19; J Abt

Based on maximum back pressure of .05 psig (For increased allowable pressure drop consult factory)

See web site below for calculation method:

<http://www.pressure-drop.com/Online-Calculator/index.html>

Determining Equivalent Length of Piping

Equivalent straight length in feet for fittings:		
Pipe size	For 90 degree elbow, cross, or tee	For 45 degree elbow
1	2.5	1.25
1.25	3	1.5
1.5	3.75	1.8
2	5	2.5
2.5	6.25	3.1
3	7.5	3.8
3.5	8.75	4.4
4	10	5
5	12.5	6.25
6	15	7.5
8	20	10