

TORCH PERFORMANCE

THE EFFECT OF DIFFERENT OXYGEN HOSE DIAMETERS AND LENGTHS

Air Line Sizing

Maximum recommended air flow in standard cubic feet per minute (scfm) as a guide in sizing hose and piping in compressed air systems.

MAXIMUM RECOMMENDED AIR FLOW (SCFM)

System Pressure (psi)	Nominal pipe size or hose i.d.										
	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3
5	0.5	1.2	2.7	4.9	6.6	13	27	40	80	135	240
10	0.8	1.7	3.9	7.7	11	21	44	64	125	200	370
20	1.3	3.0	6.6	13	18	35	75	110	215	350	600
40	2.5	5.5	12	23	34	62	135	200	385	640	1100
60	3.5	8.0	18	34	50	93	195	290	560	900	1600
80	4.7	10	23	44	65	120	255	380	720	1200	2100
100	5.8	13	29	54	80	150	315	470	900	1450	2600
150	8.6	20	41	80	115	220	460	680	1350	2200	3900
200	11	26	58	108	155	290	620	910	1750	2800	5000
250	14	33	73	135	200	370	770	1150	2200	3500	6100

Air Line Friction Loss

Approximate pressure loss in psi through 100 foot hose lengths complete with couplings.

I D. of Hose	Gauge Pressure (psi)	Cubic feet of air per minute (SCFM)											
		40	50	60	70	80	90	100	110	120	130	140	150
1/2	Pressure loss in psi												
	50	20.2	36.2										
	60	16.8	29.6	46.8									
	70	14.0	24.8	40.0	56.8								
	80	12.0	21.6	34.8	50.4	69.2							
	90	10.8	19.0	29.6	44.0	61.0	82.0						
	100	9.6	16.8	26.6	38.6	54.4	73.3						
3/4	110	8.6	15.2	24.0	35.2	49.2	66.6	89.0					
	50	3.0	4.8	7.0	8.8	13.0	17.0	22.8	28.4				
	60	2.4	3.8	5.6	7.6	10.4	13.6	17.2	22.4	28.2			
	70	1.8	3.0	4.6	6.4	8.4	11.0	14.0	17.6	22.0			
	80	1.6	2.6	3.8	5.6	7.2	9.4	11.6	14.4	17.6	21.2		
	90	1.4	2.2	3.2	4.6	6.2	8.0	10.0	12.4	15.0	18.0	21.6	
	100	1.2	2.0	2.8	4.0	5.4	7.0	8.8	10.8	13.2	15.8	18.8	22.2
110	1.0	1.8	2.6	3.6	4.8	6.2	7.8	9.8	11.8	14.2	16.8	19.8	