

ANTAEUS Hydraulic Back Pressure through hoses CHART



Hose pressure drop in PSI per 10 feet of hose length.

Hose Size	-06	-08	-10	-12	-16	-20	-24	-32	
Hose I.D. (in)	3/8	1/2	5/8	3/4	1	1-1/4	1-1/2	2	
DN	10	12	16	20	25	32	40	50	
US gallons per minute	.25								
	.50								
	1	2.4							
	2	4.8							
	3	7	2.2						
	4	12	3	1.2					
	5	18	4.5	1.6	0.7				
	8	39	10	3.6	1.4				
	10	59	15	5.7	2	0.6			
	12	80	20	7.2	2.6	0.8			
	15		30	10	4.2	1.2	0.4		
	18		40	15	6.3	1.5	0.6		
	20		49	19	8	2	0.7	0.3	
	25		72	26	11	3	1	0.4	
	30			34	14	3.6	1.3	0.5	0.1
	35			47	19	5	1.7	0.7	0.2
	40				25	6.5	2.2	0.9	0.2
	50				36	9	3.3	1.3	0.4
	60				50	12	4.4	1.8	0.5
	70					17	6	2.4	0.7
80					21	7.1	3	0.8	
90					27	9	3.8	1	
100					33	12	4.7	1.3	
150					60	22	8.5	2.2	
200						36	15	3.9	
250						54	22	5.3	
300							29	7.5	
400							51	14	

Hose Pressure Drop

The Chart Shows hydraulic oil pressure drop in PSI for 10-feet of Hose without fittings.

Fluid Specification: Specific Gravity = .85

Viscosity = ν = 20 Centistokes (C.S.), 20 C.S. = 97 S.S.U.)

Reference MIL-H5606, + 70 Degrees F. (=21 Degrees C)

Flow: US Gallons Per Minute (gpm)

Pressure drop based on petroleum based hydraulic oils at approximately =100 degrees F (38 Degrees C).

Differences in fluid viscosity can increase or decrease actual pressure drop.

The warmer the oil, the less pressure drop.

Example: Pressure drop through a 10-foot section of 2-inch hose with 250 gpm flow is: 5.3 psi

So if you have 300-feet of 2-inch hose with 250 gpm of flow you have: 5.3 psi X 30= 159 psi back pressure. John White, Antaeus CEO, 2020